

HCD-H900

SERVICE MANUAL

AEP Model



HCD-H900 is the tuner, deck, CD and amplifier section in MHC-900

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

CD Section	Model Name Using Similar Mechanism		HCD-H170/H170K/H700
	CD Mechanism Name		CDM13B-5BD4A
	Base Unit Name		BU-5BD4A
Tape deck Section	Model Name Using Similar Mechanism		HCD-H170/H170K/H700
	Tape Transport Mechanism Type	DECK A	TCM-190RA12A
		DECK B	TCM-190RB22A

SPECIFICATIONS

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range 87.5 — 108 MHz

Antenna FM lead antenna

Antenna terminals

75 ohm unbalanced

Intermediate frequency

10.7 MHz

AM tuner section

Tuning range

MW: 531 - 1602kHz
(AEP, Germany Model)
522 - 1611kHz
(Italian Model)

LW: 153-279kHz
(AEP, Germany Model)
144-288kHz
(Italian Model)

Antenna AM loop antenna

External antenna terminals

Intermediate frequency

450 kHz

Compact disc player section

System Compact disc digital audio system

Laser Semiconductor laser
($\lambda = 780 \text{ nm}$)

Emission duration:
Continuous

Laser output Max. $44.6 \mu\text{W}^*$

* This output is the value measured at distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

Signal-to noise ratio More than 95 dB

Dynamic range More than 90 dB

Cassette deck section

Recording system

4-track 2-channel stereo

Frequency response

(DOLBY NR OFF)

60 — 13,000 Hz ($\pm 3 \text{ dB}$), using

TYPE I cassette (Sony HF-S)

60 — 14,000 Hz ($\pm 3 \text{ dB}$), using

TYPE II cassette

Wow and flutter

0.1% WRMS $\pm 0.3\%$ (DIN)

Amplifier section

Continuous RMS power output
85 + 85 watts (6 ohms at 1 kHz, 5% THD)
Peak music power output
1000 watts

Inputs

MIX MIC (minijack): Sensitivity
1 mV, impedance 600 ohms
VIDEO/AUX (phono jack):
sensitivity 5 mV, impedance
47 kilohms

Outputs

HEADPHONES (stereo
minijack): accept headphones
of 8 ohms or more.
SPEAKERS: accept
impedance of 6 to 16 ohms.

— Continued on page2 —

COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY[®]



General

Power requirements 120V, 220V, 240V AC,
adjustable, 50/60Hz

Power consumption 160watts

Dimensions

Approx. 255 X 285 X 283mm
(w/h/d)

(8 7/8 x 11 1/4 x 11 1/4 inches)

Weight

Approx. 7.7 kg (17 lb)

Accessories supplied

AM loop antenna (1)

Remote commander (1)

Sony SUM-3 (NS) batteries (2)

FM lead antenna (1)

Speaker cords (2)

Design and specifications subject to
change without notice.

Note

This appliance conforms with EEC
Directive 87/308/EEC regarding
interference suppression.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1. SERVICING NOTES		3
SECTION 2. GENERAL		4
SECTION 3. DISASSEMBLY		
3-1. Case Removal		6
3-2. Power Block Removal		6
3-3. Main Board Removal		7
3-4. CD Mechanism Block Removal		7
3-5. TC Mechanism Block Removal		8
SECTION 4. IC PIN DESCRIPTION		9
SECTION 5. MECHANICAL ADJUSTMENTS		13
SECTION 6. ELECTRICAL ADJUSTMENTS		13
SECTION 7. DIAGRAMS		
7-1. Circuit Boards Location		19
7-2. Semiconductor Lead Layouts		20
7-3. Printed Wiring Boards — Main Section —		21
7-4. Schematic Diagrams — Main Section —		25
7-5. Printed Wiring Boards — TC Section —		30
7-6. Schematic Diagrams — TC Section —		35
7-7. Printed Wiring Boards — Display/CD Section —		40
7-8. Schematic Diagrams — Display Section —		43
7-9. Schematic Diagrams — CD Section —		46
SECTION 8. EXPLODED VIEWS		
8-1. Case, Power Section		49
8-2. Front Panel Section		50
8-3. Mechanism Deck Chassis Section		51
8-4. Mechanism Deck Section-1		52
8-5. Mechanism Deck Section-2		53
8-6. CD Mechanism Section-1		54
8-7. CD Mechanism Section-2		55
SECTION 9. ELECTRICAL PARTS LIST		56

SAFETY-RELATED COMPONENT WARNING!!

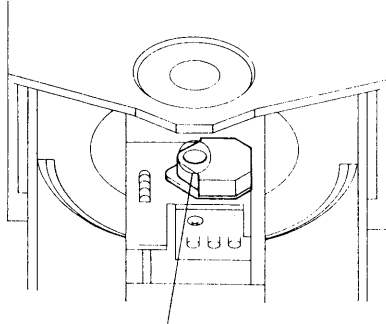
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1

SERVICING NOTES

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objecting lens.



- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

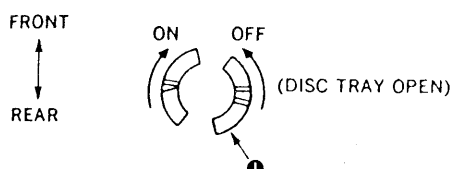
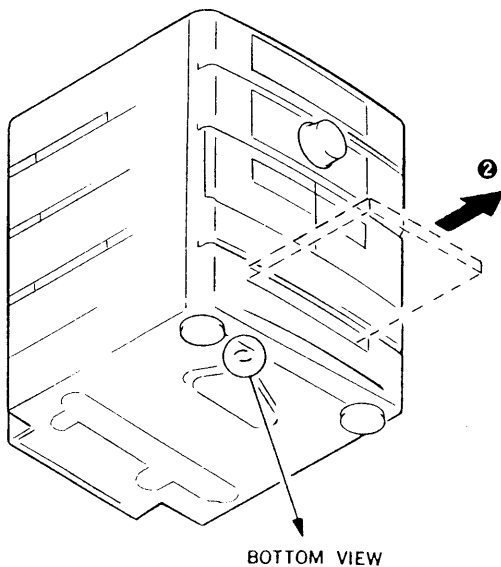
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



- (1) Insert to ① for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
- (2) Tray as come out little of front panel, pull out in the direction of arrow ② by hand.

SECTION 2 GENERAL

This section is extracted from instruction manual.

Parts Identification

Refer to the pages indicated in parenthesis for use of the buttons.

Tuner Section A

- 1 POWER ON/STANDBY switch
- 2 Remote sensor
- 3 TIMER button (98)
- 4 TIMER REC button (102)
- 5 Display window
- 6 PRESET/TIMER +/- buttons (50, 98, 102)
- 7 BAND button (46)
- 8 MEMORY/NEXT button (50, 98, 102)
- 9 STEREO/MONO button (48)
- 10 TUNING +/- buttons (46)

Amplifier Section B

- 1 DBFB control (20)
- 2 MIX MIC jack (for other models) (110)
- 3 HEADPHONES jack (20)
- 4 BALANCE control
- 5 VOLUME control (20)
- 6 PRESET button and indicators (60)
- 7 FUNCTION button
- 8 DBFB (Dynamic Bass Feed Back) button and indicator (20)
- 9 S-SUR (simulated surround) button (20)
- 10 EQ (equalizer ON/OFF) button (60)

Parts Identification

Cassette Deck Section C

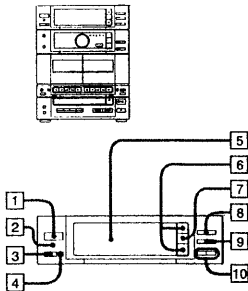
- 1 Cassette holders
- 2 HIGH SPEED button (70)
- 3 CD SYNC button (84, 92, 96)
- 4 EJECT button (for deck A) (54)
- 5 DIRECTION MODE selector (54)
- 6 Tape operating buttons (for deck A and B)
 - ▶▶ (fast wind and AMS*) button (54)
 - ◀◀ (rewind and AMS*) button (54)
 - ▷: Forward play button and direction indicator (54)
 - ◁: Reverse play button and direction indicator (54)
 - : Stop button (54)
- 7 REC (recording) button
- 8 PAUSE button (54)
- 9 EJECT button (for deck B) (66)
- 10 DOLBY NR selector (54)

CD Player Section D

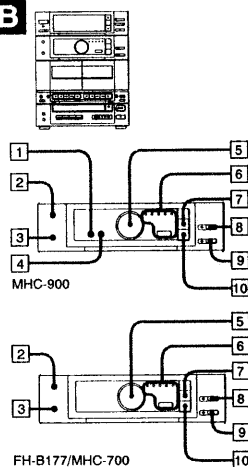
- 1 Disc tray (22)
- 2 CHECK button (40)
- 3 EDIT/TIME FADE button (76, 88)
- 4 PLAY MODE buttons
 - CONTINUE button (36)
 - SHUFFLE button (36)
 - PROGRAM button (38, 94)
- 5 OPEN/CLOSE button (22)
- 6 play/pause button (22)
- 7 (stop) button (22)
- 8 manual search/AMS* buttons (24, 94)
- 9 REPEAT button (30)

* AMS is the abbreviation of Automatic Music Sensor.

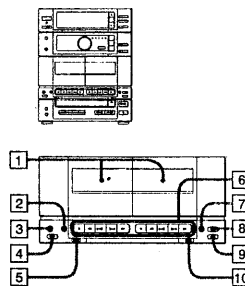
A



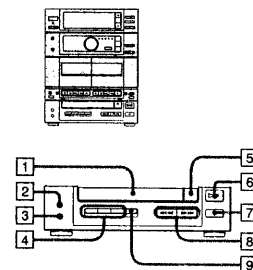
B



C

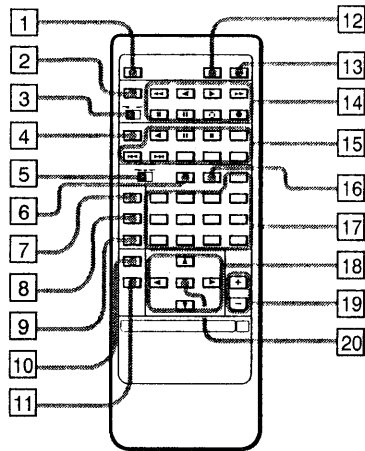


D



Parts Identification

E



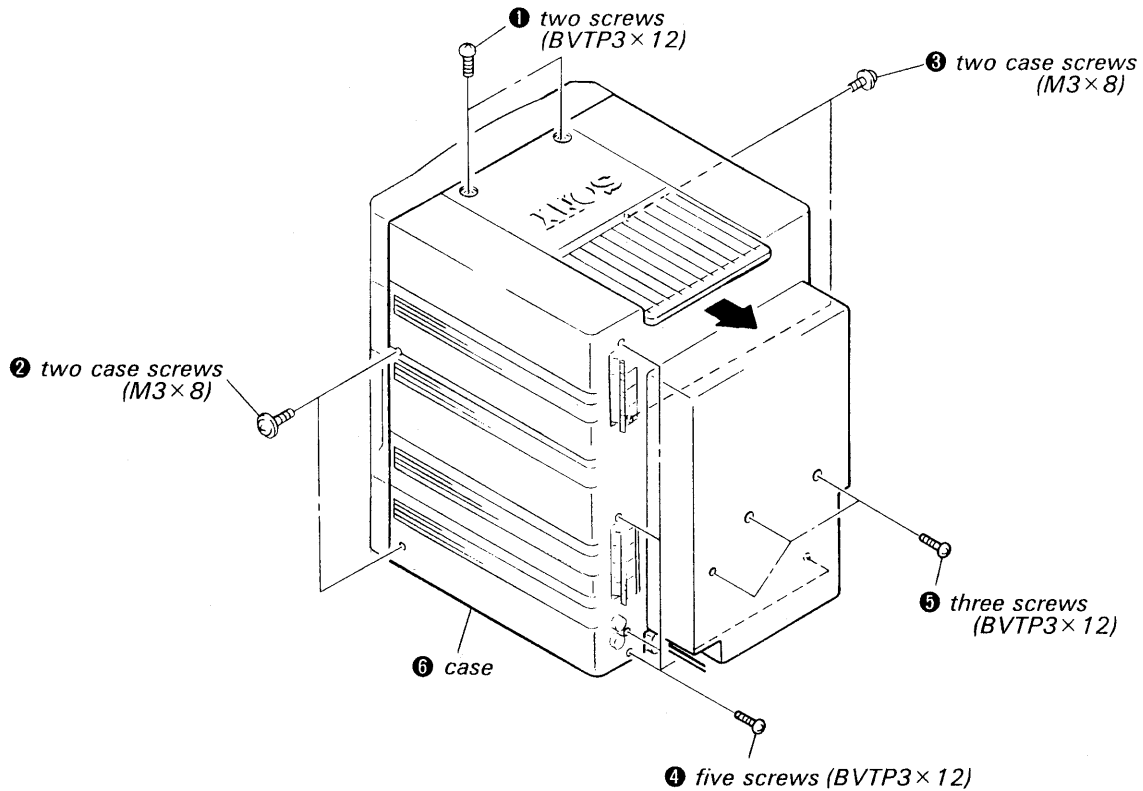
Remote Commander

- 1 CLOCK DISPLAY button (18)
- 2 TAPE function button
- 3 DECK A/B selector
- 4 CD function button
- 5 TUNER/EQ/CD selector
- 6 CHECK button (40)
- 7 TUNER function button
- 8 VIDEO function button
- 9 PHONO function button
- 10 MEMORY button (64)
- 11 DBFB button (20)
- 12 SLEEP button (108)
- 13 SYSTEM POWER button
- 14 Tape operating buttons
- 15 CD player operating buttons
- 16 CLEAR button (36)
- 17 TUNER/EQ/CD numeric buttons (26, 60)
- 18 CURSOR CONTROL buttons (62)
- 19 VOL +/- (volume control) buttons (20)
- 20 EQ button (60)

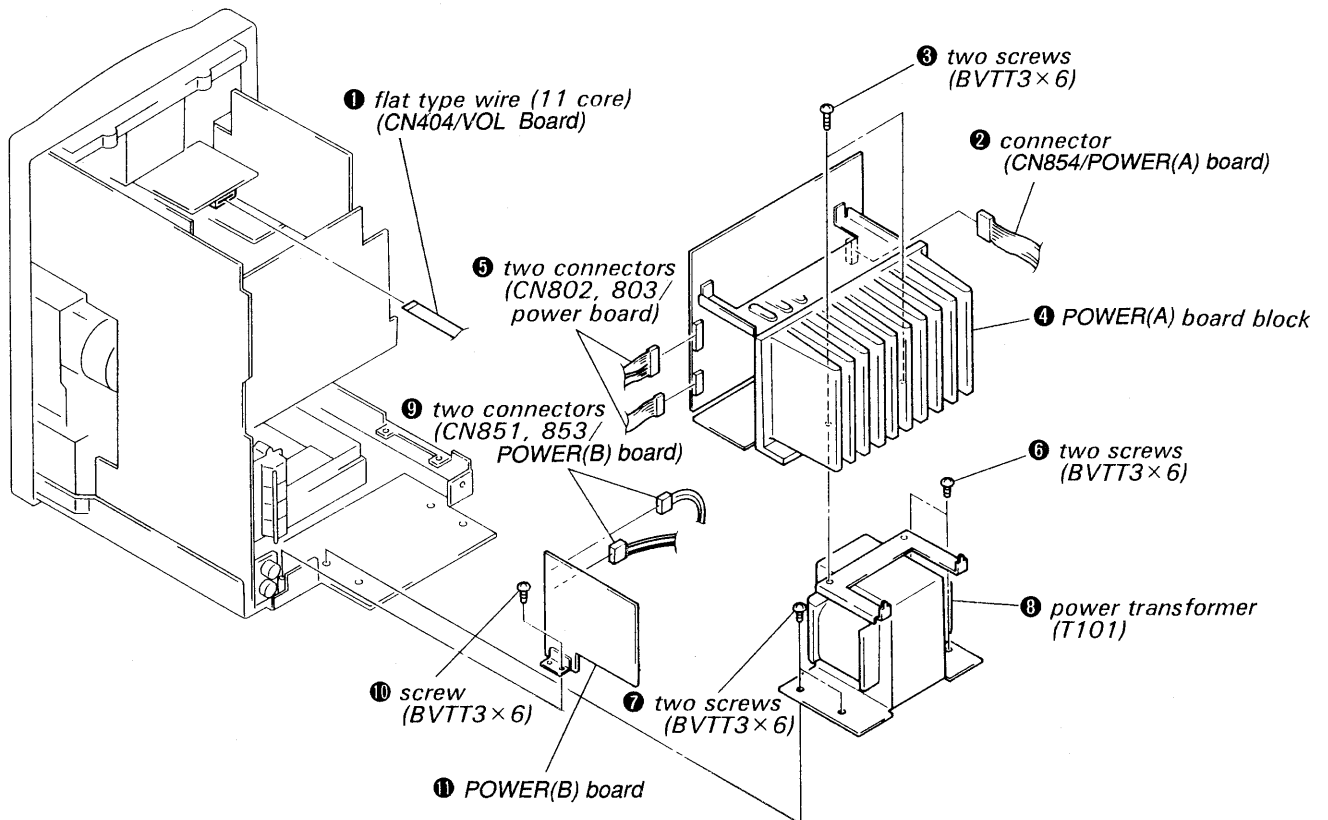
SECTION 3 DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

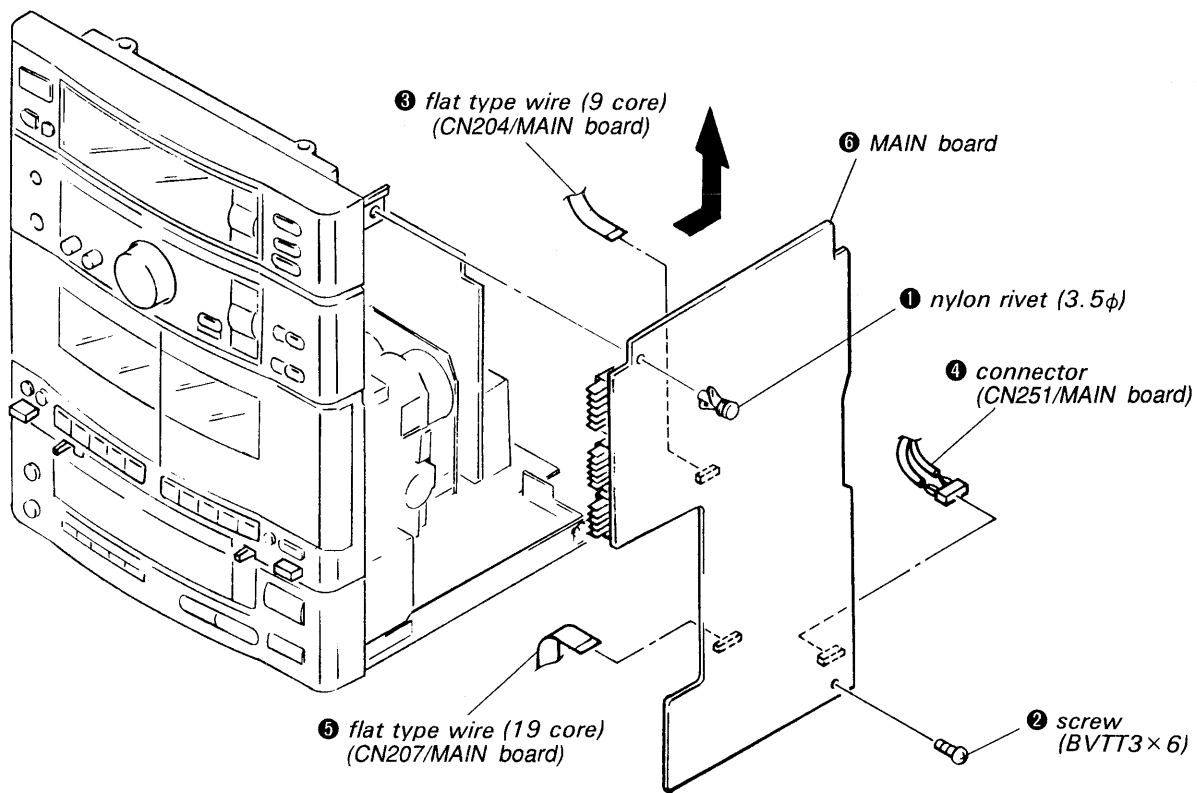
3-1. CASE REMOVAL



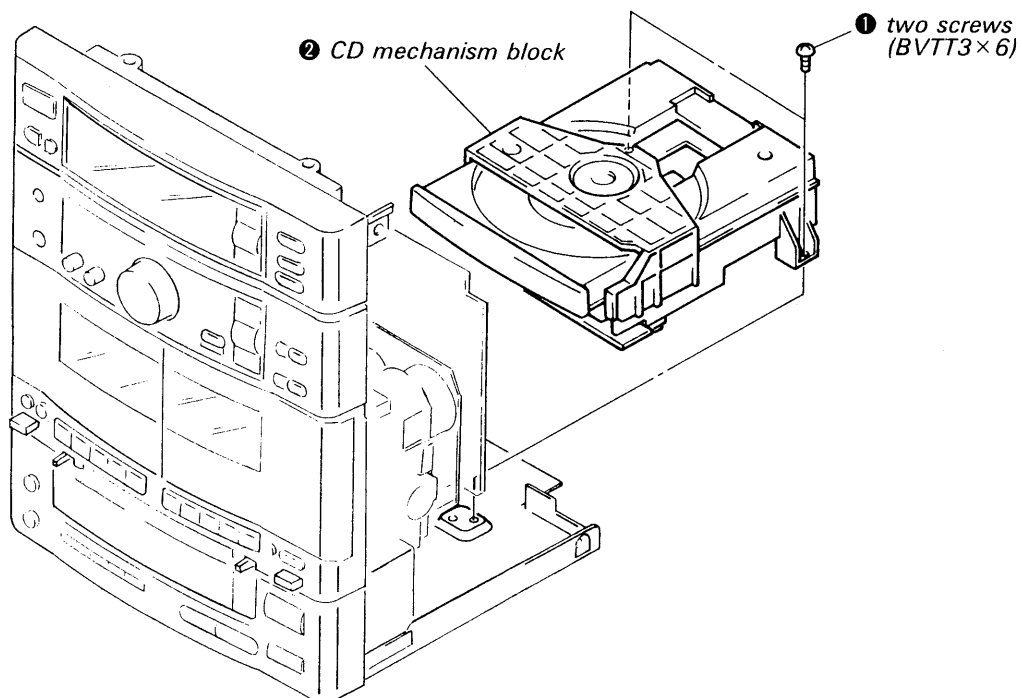
3-2. POWER BLOCK REMOVAL



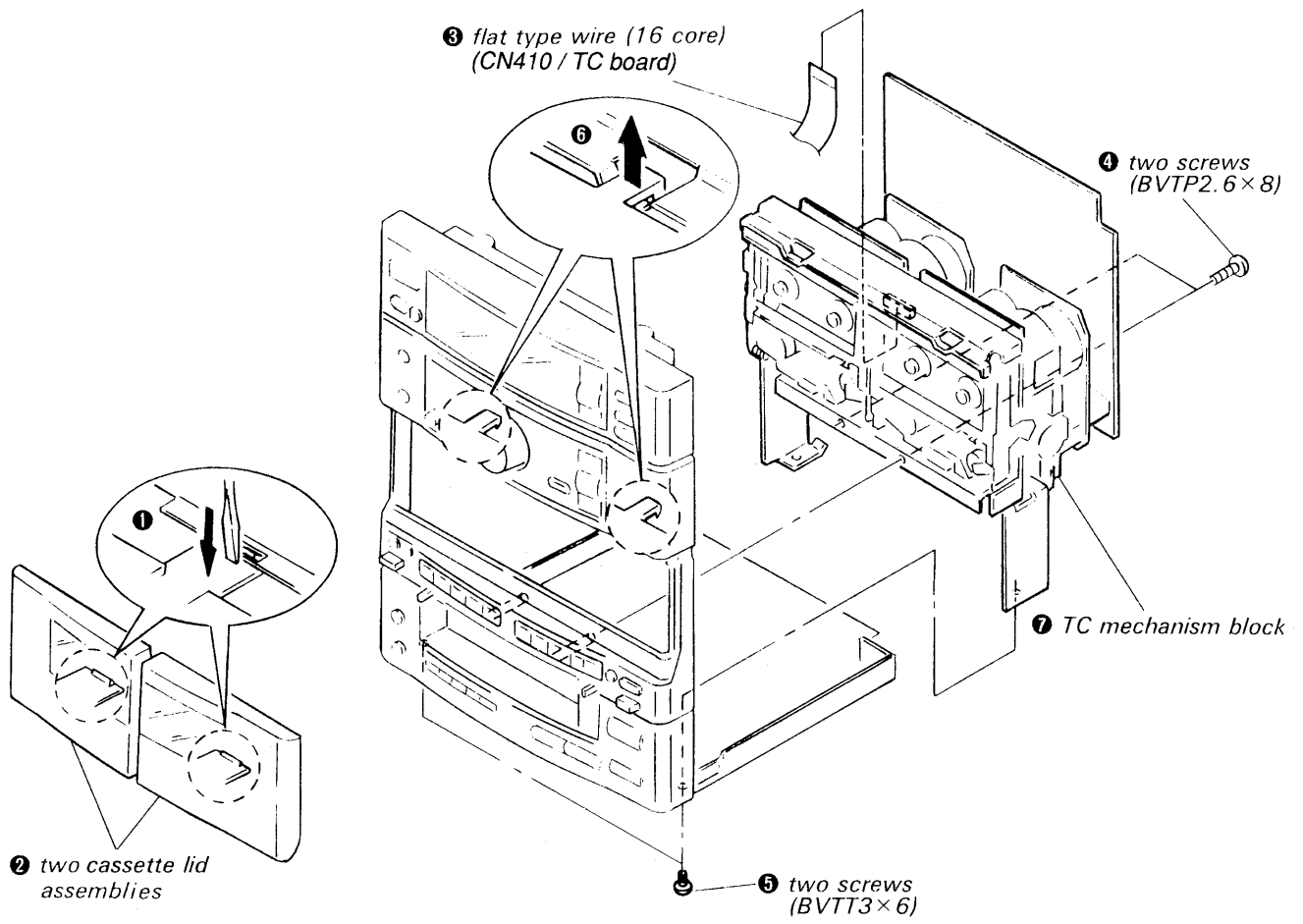
3-3. MAIN BOARD REMOVAL



3-4. CD MECHANISM BLOCK REMOVAL



3-5. TC MECHANISM BLOCK REMOVAL



SECTION 4

IC PIN DESCRIPTION

• IC401 Deck Controller (M50946-302) (TC board)

Pin No.	Pin Name	I/O	Symbol	Description																																				
1	P62		G	GND																																				
2	P61		G	GND																																				
3	P60		G	GND																																				
4	P47		G	GND																																				
5	P46		G	GND																																				
6	AN5	I	B HALF	Deck B record prevention claw A, B detection input (Analog) <table><tr><td>Volgate (V)</td><td>1V</td><td>1.9V</td><td>2.8V</td><td>3.9V</td><td>5V</td></tr><tr><td>Harf</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr><tr><td>E. PROOF A</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td></tr><tr><td>E. PROOF B</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr></table>	Volgate (V)	1V	1.9V	2.8V	3.9V	5V	Harf	ON	ON	ON	ON	OFF	E. PROOF A	OFF	ON	OFF	ON	OFF	E. PROOF B	ON	ON	OFF	OFF	OFF												
Volgate (V)	1V	1.9V	2.8V	3.9V	5V																																			
Harf	ON	ON	ON	ON	OFF																																			
E. PROOF A	OFF	ON	OFF	ON	OFF																																			
E. PROOF B	ON	ON	OFF	OFF	OFF																																			
7	AN4	I	KEY Y	KEY input <table><tr><td>Volgate (V)</td><td>0</td><td>0.3</td><td>0.7</td><td>1.2</td><td>1.7</td><td>2.3</td><td>2.8</td><td>3.4</td><td>4.0</td><td>4.5</td><td>5.0</td></tr><tr><td>KEY Y</td><td>B■</td><td>B■■</td><td>B►</td><td>B◄</td><td></td><td>A◄◄</td><td>A►►</td><td></td><td></td><td>RELAY</td><td>OFF</td></tr><tr><td>KEY X</td><td>A■</td><td>A►</td><td>A◄</td><td>A◄◄</td><td>B◄◄</td><td>B●</td><td>B</td><td>CD</td><td></td><td></td><td></td></tr></table>	Volgate (V)	0	0.3	0.7	1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0	KEY Y	B■	B■■	B►	B◄		A◄◄	A►►			RELAY	OFF	KEY X	A■	A►	A◄	A◄◄	B◄◄	B●	B	CD			
Volgate (V)	0	0.3	0.7		1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0																												
KEY Y	B■	B■■	B►	B◄		A◄◄	A►►			RELAY	OFF																													
KEY X	A■	A►	A◄	A◄◄	B◄◄	B●	B	CD																																
8	AN3	I	KEY X																																					
9	AN2	I	AMS IN	AMS signal input																																				
10	P41	O	L MUTE	Line mute output																																				
11	P40	O	R MUTE	mute output																																				
12	P37	O	RELAY (B MD)	REC/PB change relay output																																				
13	P36	O	R/P	Dolby IC REC/PB select output																																				
14	P35	O	EQ70	Playback EQ output for playing deck																																				
15	P34	O	SEL A/B	Dolby IC PB input Deck A/B select output																																				
16	P33	O	AMS A/B	AMS AMP input Deck A/B select output																																				
17	P32	I	AU BUS	AUDIO BUS input																																				
18	P31	O	BIAS	Bias oscillation output																																				
19	P30	O	AUB OUT	AUDIO BUS output																																				
20	INT1	I	A UBUS	AUDIO BUS normal input																																				
21	NC	—	—	—																																				
22	NC	—	—	—																																				
23	NC	—	—	—																																				
24	CNVSS		CNVSS	GND																																				
25	RESET	I	RESET	Microcomputer reset input																																				
26	XIN	I	XIN	Clock input (4MHz)																																				
27	Xo	O	Xo	Clock output (4MHz)																																				
28	Φ	O	Φ	Not used (open)																																				
29, 65	Vss		Vss	GND																																				
30	P57	I	PW IN	POWER OFF detection input																																				
31	P56	I	A STOP	Deck A STOP switch input																																				
32	P55	I	A HALF	Deck A Half switch input																																				
33	P54	I	A SHUT	Deck A Reel table signal input																																				
34	P53	I	A70 U	Deck A TYPE II switch input																																				
35	P52	I	B STOP	Deck B STOP switch input																																				
36	P51	I	B SHUT	Deck B Reel table signal input																																				
37	P50	I	B70 U	Deck B TYPE II switch input																																				
38	NC	—	—	—																																				
39	P17	O	ARM 3	Deck A Reel Motor control out																																				
40	P16	O	ARM 2	Deck A Reel Motor control out																																				

Pin No.	Pin Name	I/O	Symbol	Description
41	P15	O	ARM 1	Deck A Reel Motor control out
42	P14	O	BRM 3	Deck B Reel Motor control out
43	P13	O	BRM 2	Deck B Reel Motor control out
44	P12	O	BRM 1	Deck B Reel Motor control out
45	P11	O	H/L	Capstan motor speed select
46	P10	O	A CM	A Capstan motor ON/OFF
47	P07	O	B CM	B Capstan motor ON/OFF
48	P06	I	BS/ASCH	Deck A Reel table/BS signal input
49	P05	I	A • P/BSCH	Deck B Reel table/A • P signal input
50	P04	O	A ◁	Deck A RVS LED output
51	P03	O	A ▷	Deck A FWD LED output
52	P02	O	A PLAY	Deck B RVS/FWD LED control output
53	P01	O	DUB H	High Speed Dubbing LED output
54	P00	O	DUB N	Normal Speed Dubbing LED output (Not used)
55	NC	—	—	—
56	P27	O	CD SYNC	Auto CD Synchro LED output
57	P26	O	B ◁	Deck B RVS LED output
58	P25	O	B ▷	Deck B FWD LED output
59	O24	O	B PLAY	Deck B RVS/FWD LED control output
60	P23	O	B PAUSE	Deck B PAUSE LED output
61	P22	O	B ●	Auto CD Synchro LED output
62	P21	O	PASS	PASS amplifier switch output
63	P20	I	TEST	Electrical adjustment test mode setting
64	NC	—	—	—
66	NC	—	—	—
67	Vcc		Vcc	POWER 5 ± 0.5V
68	AVss		AVss	Analog system GND
69	VREF	I	VREF	Analog system reference voltage input
70	D • A		D • A	GND
71	PWM		—	GND
72	P63		—	GND

[TEST MODE]

When making pin ⑥ low (connect TP1 to ground with jumper wire), following function operates.

1. Sourec monitor

Release the line mute while recording.

● IC202 CD Controller (μ PD75116GF) (BD board)

Pin No.	Pin Name	I/O	Description
1	Not Used	O	OPEN
2	Not Used	O	OPEN
3	DPCLK	O	Display data transmission clock output
4	LATCH	O	Serial data latch pulse output for digital filter MSM6538
5	SHIPT	O	Serial clock output for digital filter MSM6538
6	AFT	O	Serial clock output for digital filter MSM6538
7	RESET	I	System reset input terminal (LOW ACTIVE)
8	X2	I	System clock input 4.0MHZ
9	X1	I	System clock input 4.0MHz
10	DFCTSW	O	For focus in till spindle kick is ON except then is OFF.
11	AMUTE	O	Muting ON/OFF output
12	BSOUT	O	Audio bus output
13	AFADJ	I	Teast mode input, and on time POWER "L" is test move ment of every kind
14	LDON	O	Laser diode ON/OFF output
15	XKT	O	Serial data latch pulse output for CXD2500BQ
16	CLK	O	Serial data output for CXD2500BQ
17	DATA	O	Serial data output for CXD2500BQ
18	Not Used	I	GND
19	ADJ	I	Test mode input, "L" is GFS no check.
20	GFS	I	GFS OK/NO Good input
21	FOK	I	Focus OK/NO Good input
22	Not Used	O	OPEN
23	Not Used	O	OPEN
24	LODOUT	O	Disc tray loading-out output
25	LODIN	O	Disc tray loading-out output
26	VSS	I	GND
27	INSW	I	Disk tray clamp-end input
28	OUTSW	I	Disk tray open-end input
29	(TIMER)	I	Timer start input
30	BSIN	I	Audio bus input
31	Not Used	I	GND
32	Not Used	I	GND
33	Not Used	I	GND
34	Not Used	I	GND
35	Not Used	I	GND
36	Not Used	I	GND
37	SENS	I	SENS input, and the state input of every kind from CXD2500BQ
38	TIMER	I	(NOT-PLAY)
39	D/F 16BT	I	(NOT-PLAY)
40	Not Used	I	GND
41	SUBQ	I	Q data serial input from CXD2500BQ
42	Not Used	O	OPEN
43	SQCLK	O	Sub-code Q data read-in clock output for CXD2500BQ
44	SCOR	I	Sub-code synchro S0 and S1 detect input
45	Not Used	O	OPEN
46	Not Used	O	OPEN
47	Not Used	O	OPEN
48	Not Used	O	OPEN
49	Not Used	I	OPEN
50	Not Used	I	OPEN

Pin No.	Pin Name	I/O	Description
51	Not Used	I	OPEN
52	Not Used	I	OPEN
53	Not Used	O	OPEN
54	Not Used	O	OPEN
55	Not Used	O	OPEN
56	Not Used	O	OPEN
57	Not Used	I	+ 5V
58	VDD	I	+ 5V
59	DPDAT3	O	OPEN
60	DPDAT2	O	OPEN
61	DPDAT1	O	OPEN
62	DPDAT0	O	OPEN

SECTION 5 MECHANICAL ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured alcoholmoistened swab:

record/playback head	pinch roller
erase head	rubber belt
capstan	idler
- Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
- Do not use a magnetized screwdriver for the adjustment.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustment should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g • cm (0.49 to 0.83oz • inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.028 to 0.08oz • inch)
Reverse	CQ-102RB	35 to 60g • cm (0.49 to 0.83oz • inch)
Reverse back tension	CQ-102RB	2 to 6g • cm (0.028 to 0.08oz • inch)
FF/REW	CQ-201B	70 to 110g • cm (0.98 to 1.52oz • inch)

• FL tube, LED, Key and SIRCS Check Mode

- At POWER ON, press "BAND", "DBFB" and "POWER" keys simultaneously to activate the Check mode.
- In the Check mode, FL tube and LEDs are all come on.
- When "TIMER" key is pressed, FL tube and a part of LEDs come on.
- Key check and one LED ON
Keys to be checked are associated with segments (1-15), one by one.
The segment associated with the pressed key goes off, and the segments associate with non-pressed keys come on. One LED comes on, and LED that comes on is shifted each time the key is pressed. when all keys are pressed at least once, "PASS" is displayed in the center, and all LEDs come on.
- SIRCS check (with RM-S150)
When CD PAUSE is received, the Pause segment comes on.
- To turn off the Check mode, press "POWER" key or send SIRCS POWER CODE.
- When LEDs are partially ON

ON LEDs :	PRESET 1	OFF LEDs :	PRESET 2
	PRESET 3		PRESET 4
	PRESET 5		SURROUND
	DBFB		MPX
	PON		

• The corresponding of Segments with Keys

Segments	Keys
1	: TIMER REC
2	: +(PRESET/TIMER)
3	: BAND
4	: (PRESET/TIMER)
5	: MEMORY/NEXT
6	: STEREO/MONO
7	: +(TUNING)
8	: -(TUNING)
9	: DBFB
10	: S-SUR
11	: FUNCTION
12	: EQ
13	: PRESET
14	: (not used)
15	: OPEN/CLOSE

SECTION 6 ELECTRICAL ADJUSTMENTS

DECK SECTION

- The adjustment should be performed in the publication.
(Be sure to make playback adjustment at first.)
- The adjustment and measurement should be performed for both L-CH and R-CH.
 - Switch position
DOLBY NR switch : OFF

•Test tape

Tape	Contents	Use
P-4-A100	10kHz, -10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

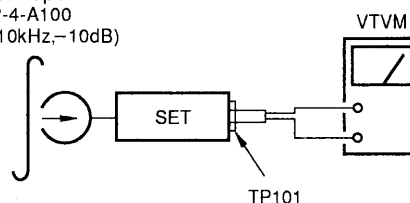
Record/Playback Head Azimuth Adjustment

DECK A DECK B

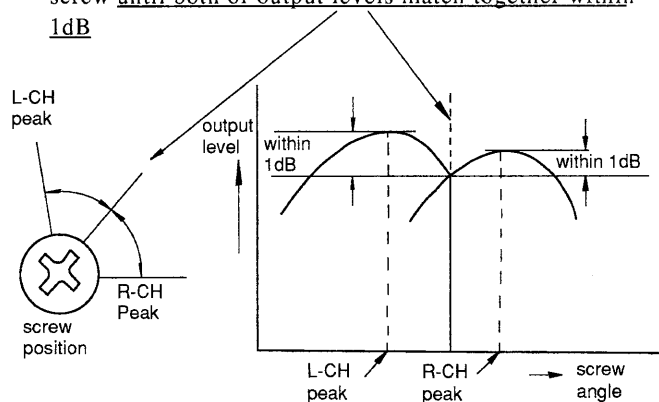
Procedure :

- Forward Playback Mode
Reverse Playback Mode

test tape
P-4-A100
(10kHz, -10dB)

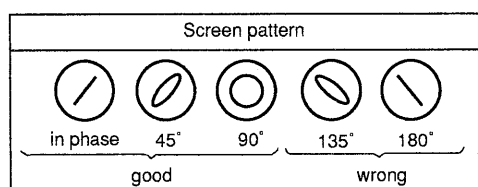
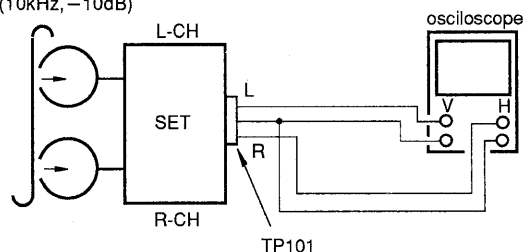


- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB



3. Playback Mode

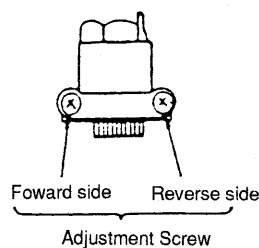
test tape
P-4-A100
(10kHz, -10dB)



- Change the review playback mode and repeat the steps 1 to 3.
- After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :

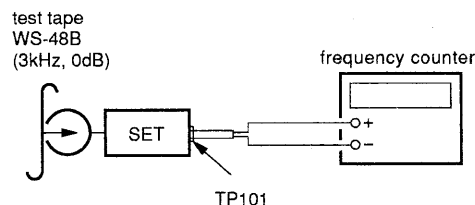
— record/playback head (deck A and B)



Tape Speed Adjustment **DECK A** **DECK B**

Procedure :

- Perform high speed adjustment before normal speed adjustment.
- Mode : Playback



Speed	Deck	Adjustment	Frequency counter
※High	A	RV72A	5,970 to 6,030Hz
	B	RV72B	
Normal	A	RV71A	2,970 to 3,030Hz
	B	RV71B	

※ Continue to press HIGH SPEED DUBBING switch(S1524) in playback mode : High speed playback.

Frequency difference between the beginning and the end of the tape should be within $\pm 0.23\%$.

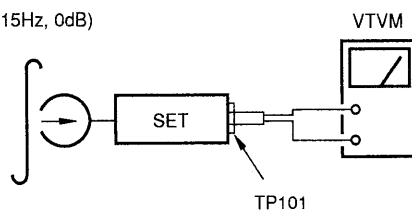
Adjustment Location: AUDIO-A and AUDIO-B boards.

Playback Level Adjustment **DECK A** **DECK B**

Procedure :

Mode : playback

test tape
P-4-L300
(315Hz, 0dB)



Deck A is RV11A (L-CH) and RV21A (R-CH), deck B is RV11B (L-CH) and RV21B (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level :

LINE OUT level $\sim 8.2\text{dB}$ to -7.2dB (0.301 to 0.338V) Level
Difference between Channels : within 1dB

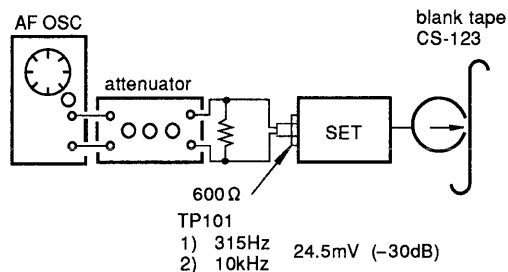
Confirm the DOLBY OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : AUDIO-A and AUDIO-B boards

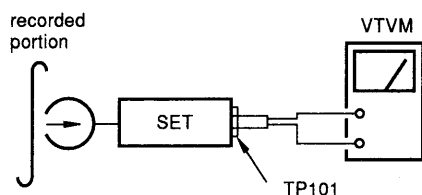
Record Bias Adjustment **DECK B**

Procedure :

1. record mode



2. playback mode



Confirm playback the signal recorded in step 1 become adjustment level as follows.

If these levels do not adjustment level, adjustment the RV12 (L-CH) and RV22 (R-CH) to repeat step 1 and 2.

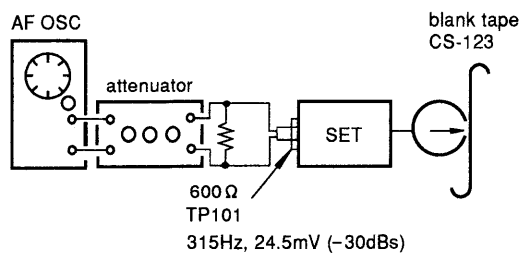
Adjustment level : playback output of 315Hz to playback output of 10kHz : -1.0dB to 1.0dB

Adjustment Location : AUDIO-B board

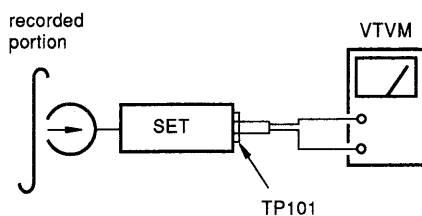
Record Level Adjustment **DECK B**

Procedure :

1. record mode



2. playback mode



Confirm playback the signal recorded in step become adjustment level as follows.

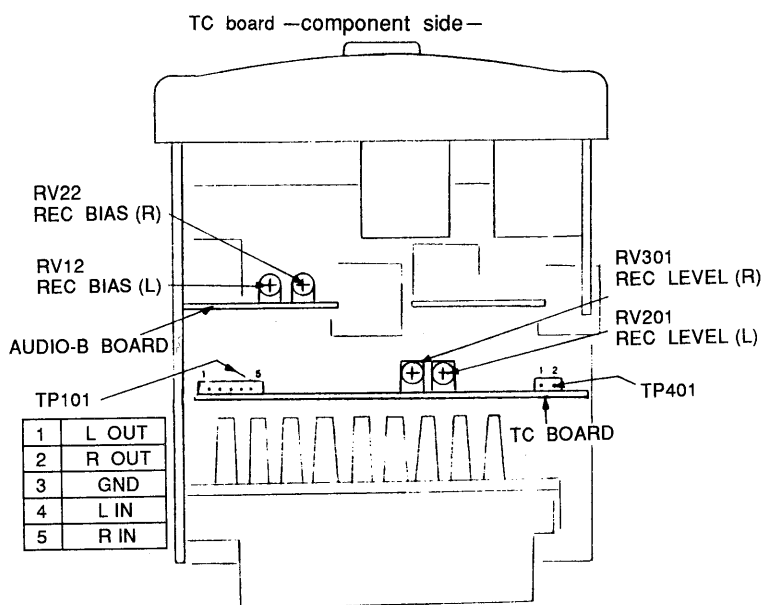
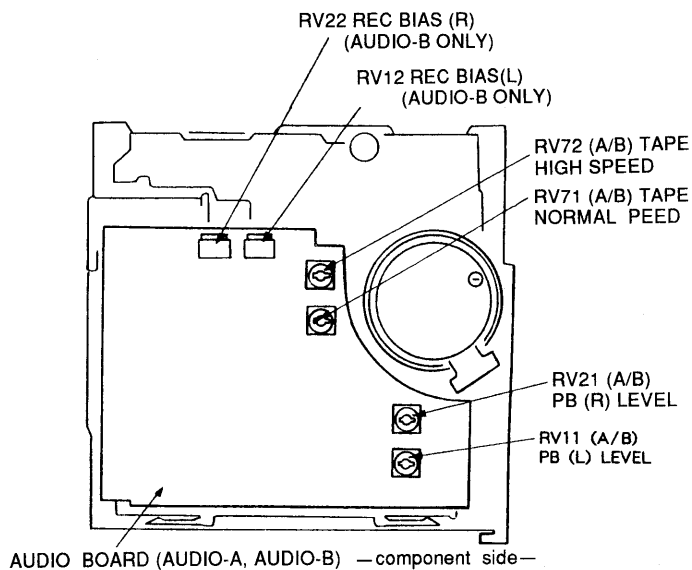
If these levels do not adjustment level, adjustment the RV201 (L-CH) and RV301 (R-CH) to repeat step 1 and 2.

Adjustment Level :

LINE OUT level : 30dBs±0.5dB (25.9 to 23.1mV)

Adjustment Location : MAIN board

Adjustment Location :

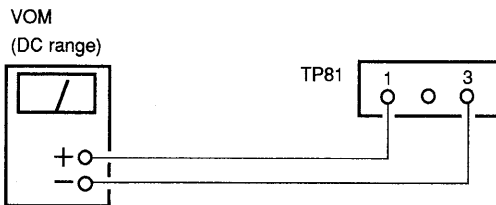
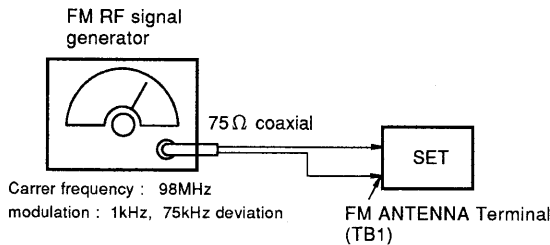


Note : As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

TUNER SECTION

FM SECTION ADJUSTMENTS

Setting :



FM Discriminator Alignment (NULL Check)

Band : FM

Procedure :

1. Supply a 1mV(60dB μ) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust IFT82 for 0V reading on the VOM.

Note : FM tuned indication lighting level adjustment should be made after FM discriminator alignment.

Adjustment Location: MAIN board

FM Tuned Indication Lighting Level Adjustment

Band : FM

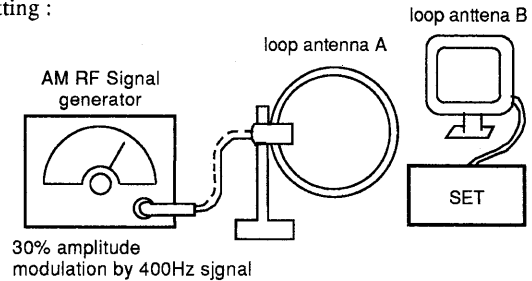
Procedure:

1. Supply a 25dB μ (AEP only), 20dB μ (G.IT only) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV81 so that the **TUNED** light up.

- Repeat the procedures in each adjustment several times. and the frequency coverage and tracking adjustments should be finally done by trimmer capacitors.

AM SECTION ADJUSTMENTS

Setting :



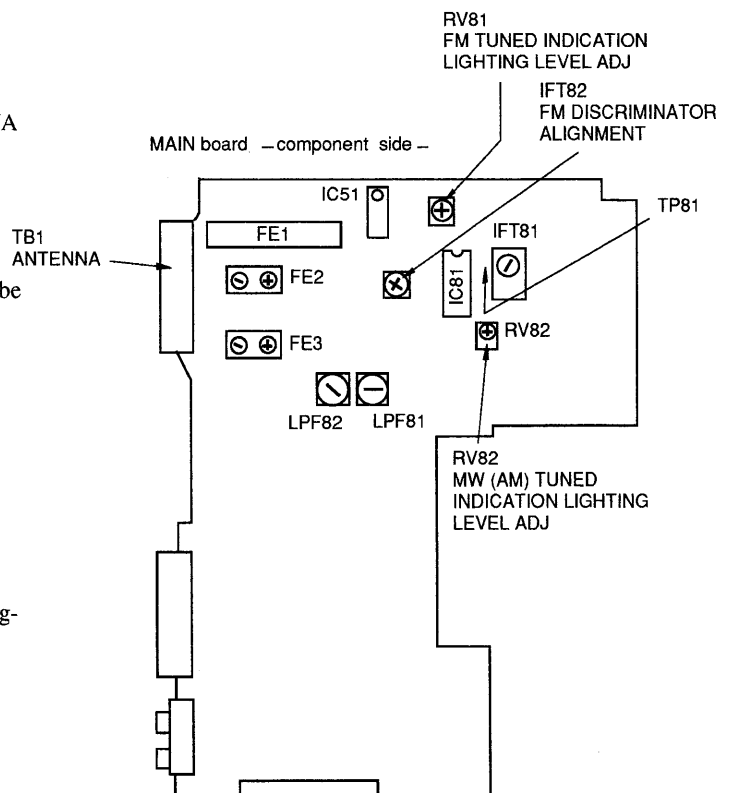
MW Tuned Indication Lighting Level Adjustment

Band : MW

Procedure:

1. Set loop antenna A so that the loop antenna. B input level becomes 55dB μ .
2. Tune the set to 999kHz.
3. Adjust the RV82 so that the **TUNED** light up.

Adjustment Location : MAIN board -component side-

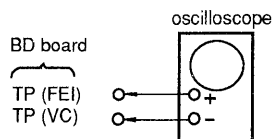


CD SECTION

Note :

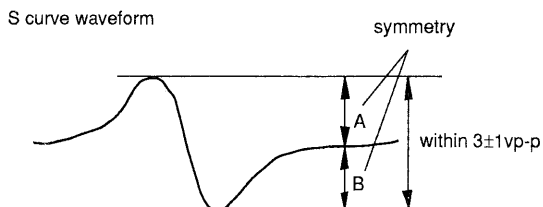
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than $10M\Omega$ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEI) on BD board.
2. Connect between test point TP (FE) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3\pm 1Vp-p$.

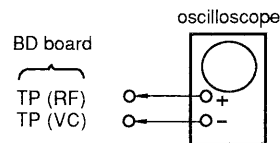


5. After check, remove the lead wire connected in step 2.

Note :

- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

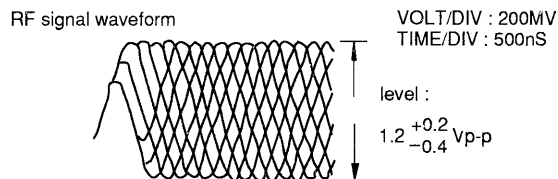


Procedure :

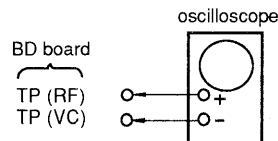
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

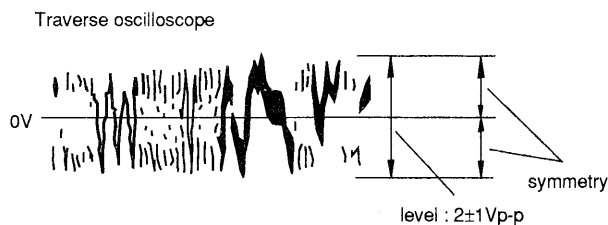


E-F Balance Check



Procedure:

1. Connect test point TP (ADJ) to ground and TP (TEO) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEI) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

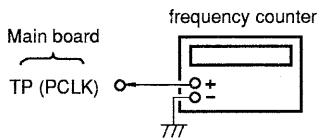


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

- 1. Connect frequency counter to test point (PCLK) with lead wire.



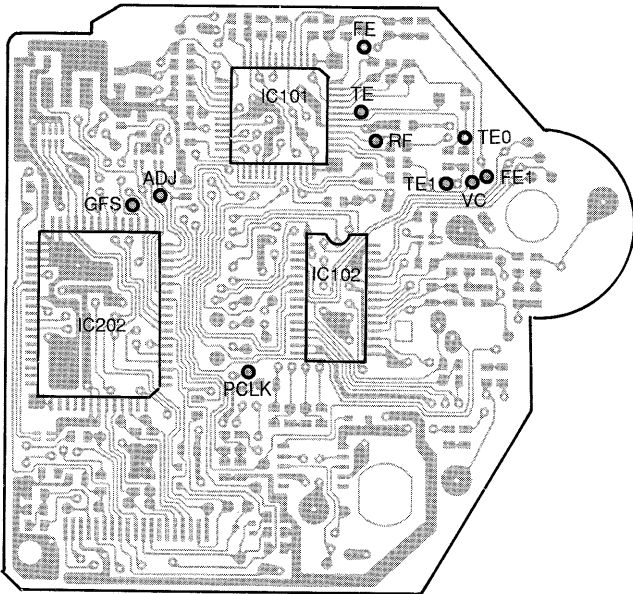
- 2. Turned Power switch on.
- 3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position
when you moved and do not know original position.

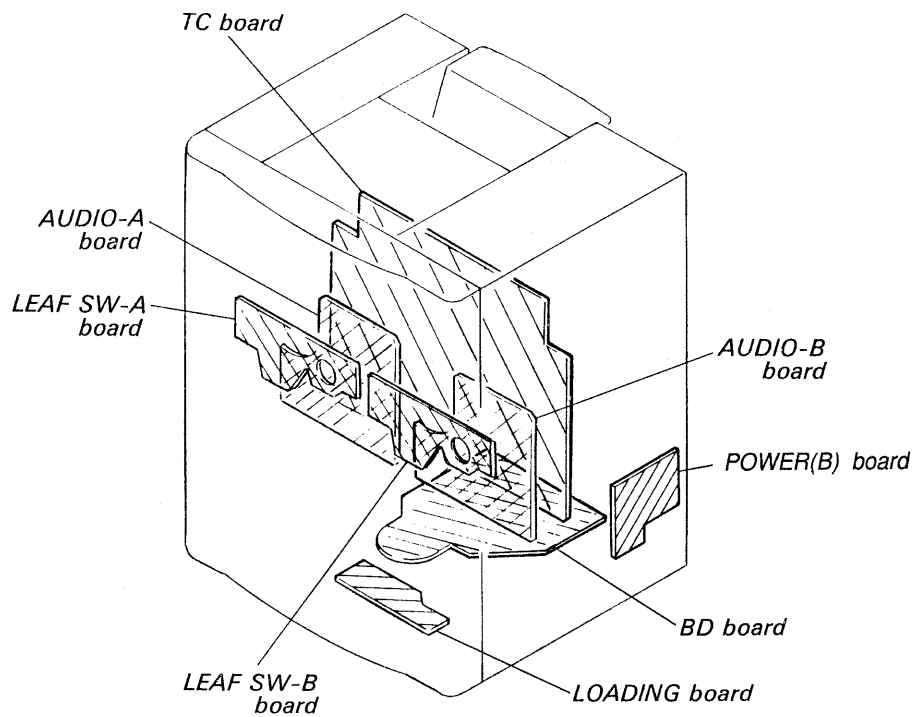
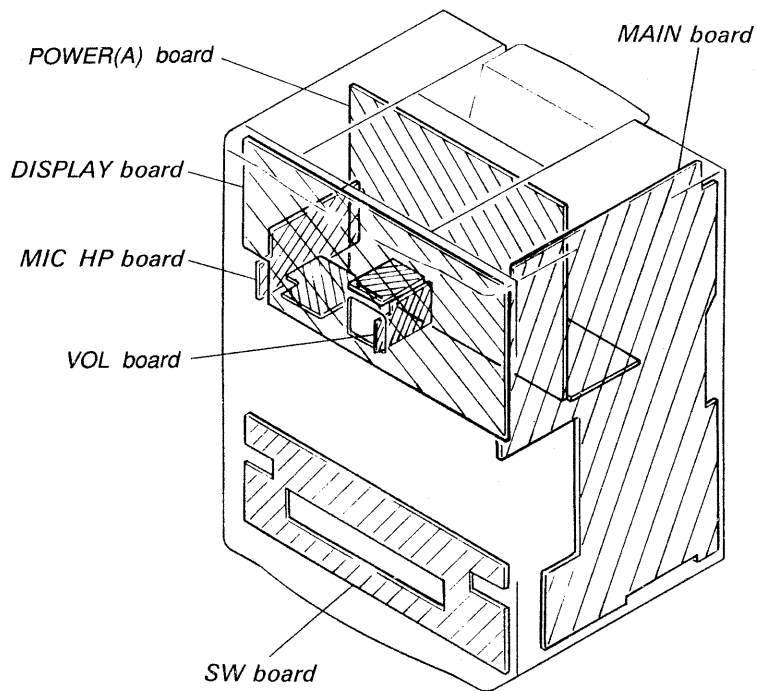
Adjustment Location :

BD board -conductor side-



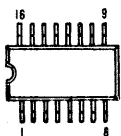
SECTION 7 DIAGRAMS

7-1. CIRCUIT BOARDS LOCATION



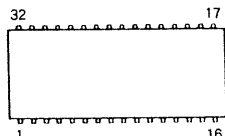
7-2. SEMICONDUCTOR LEAD LAYOUTS

CD4052BCM

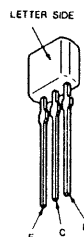


(TOP VIEW)

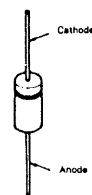
M5218AP



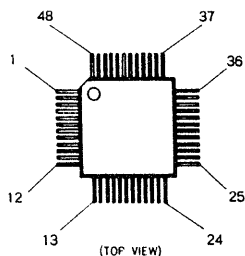
**2SA1175-HFE
25C2785-HFE
DTA124ES**



**1N4148M
UZ-36BSB
1S1585
10E2**

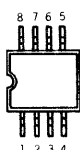


CXA1372AQ



(TOP VIEW)

M54641FP

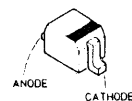


(TOP VIEW)

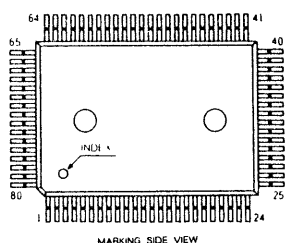
**2SC2724-CD
2SC3622A-LK
DTA114ES
DTA144ES
DTC114ES
DTC143TS**



**1SS352
DTZ3.9B**



CXD2500BQ



MARKING SIDE VIEW

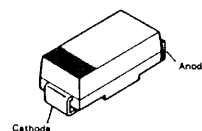
PST572E



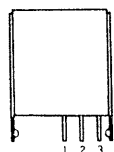
**2SC1841-PAFAEA
2SC3112**



EC10DS2

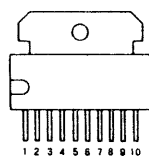


GP1U59XB



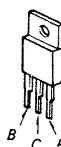
1 Yout
2 Vcc
3 GND

TA7272P

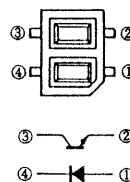


MARKING SIDE VIEW

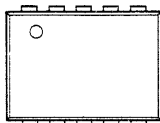
**2SA473
2SD2012**



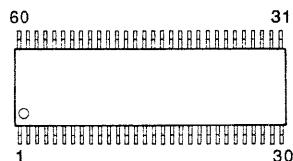
NJL5165K-B



LA5601



SN755703

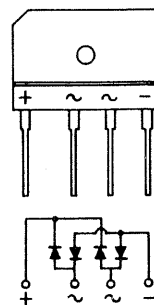


(TOP VIEW)

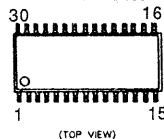
2SK246-GR3



D5SBA20F01

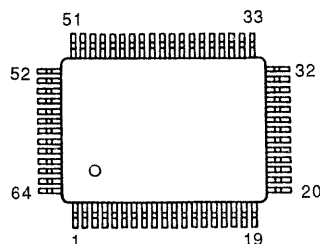


LA6525M



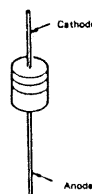
(TOP VIEW)

μPD75116GF-F21-3BE

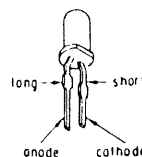


TOP VIEW

**HZS6A1L
HZS6C3L
UZL-9M2**



**SML1260S
SML1460E
SML1960E
SML1960S**



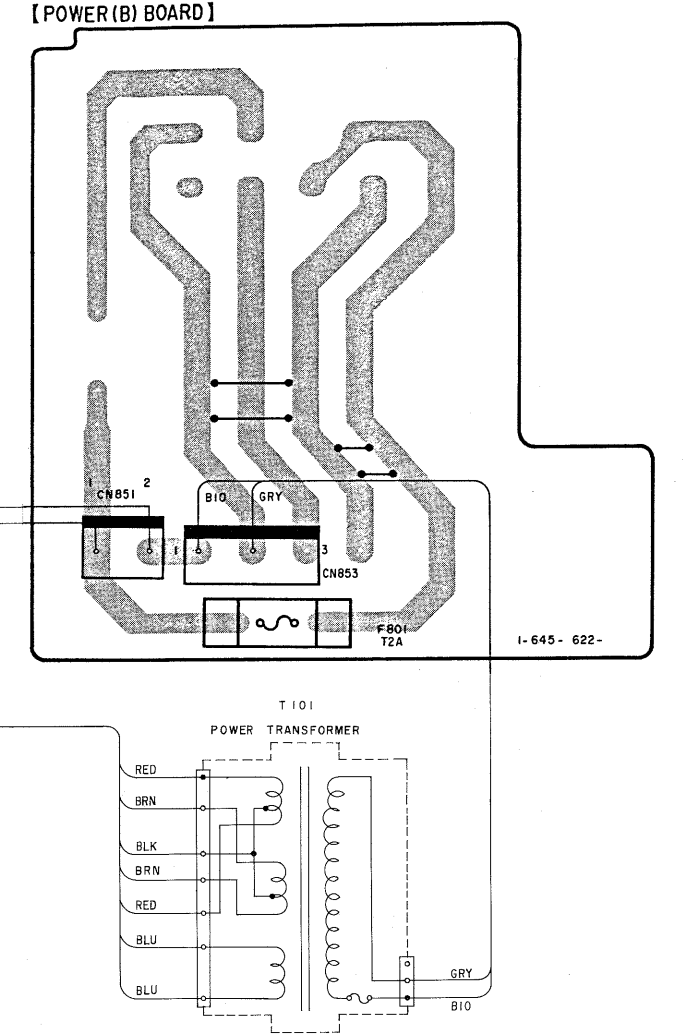
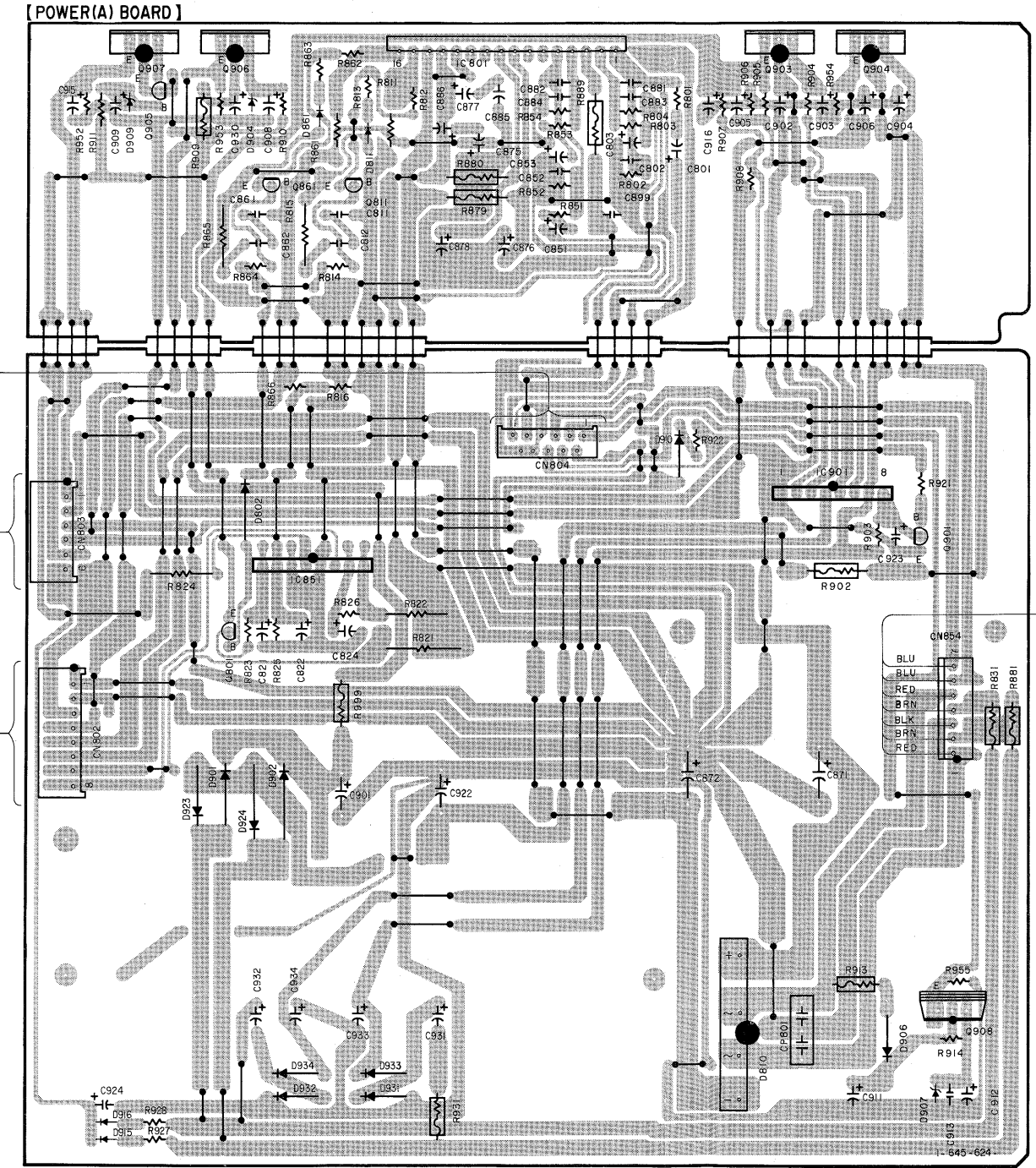
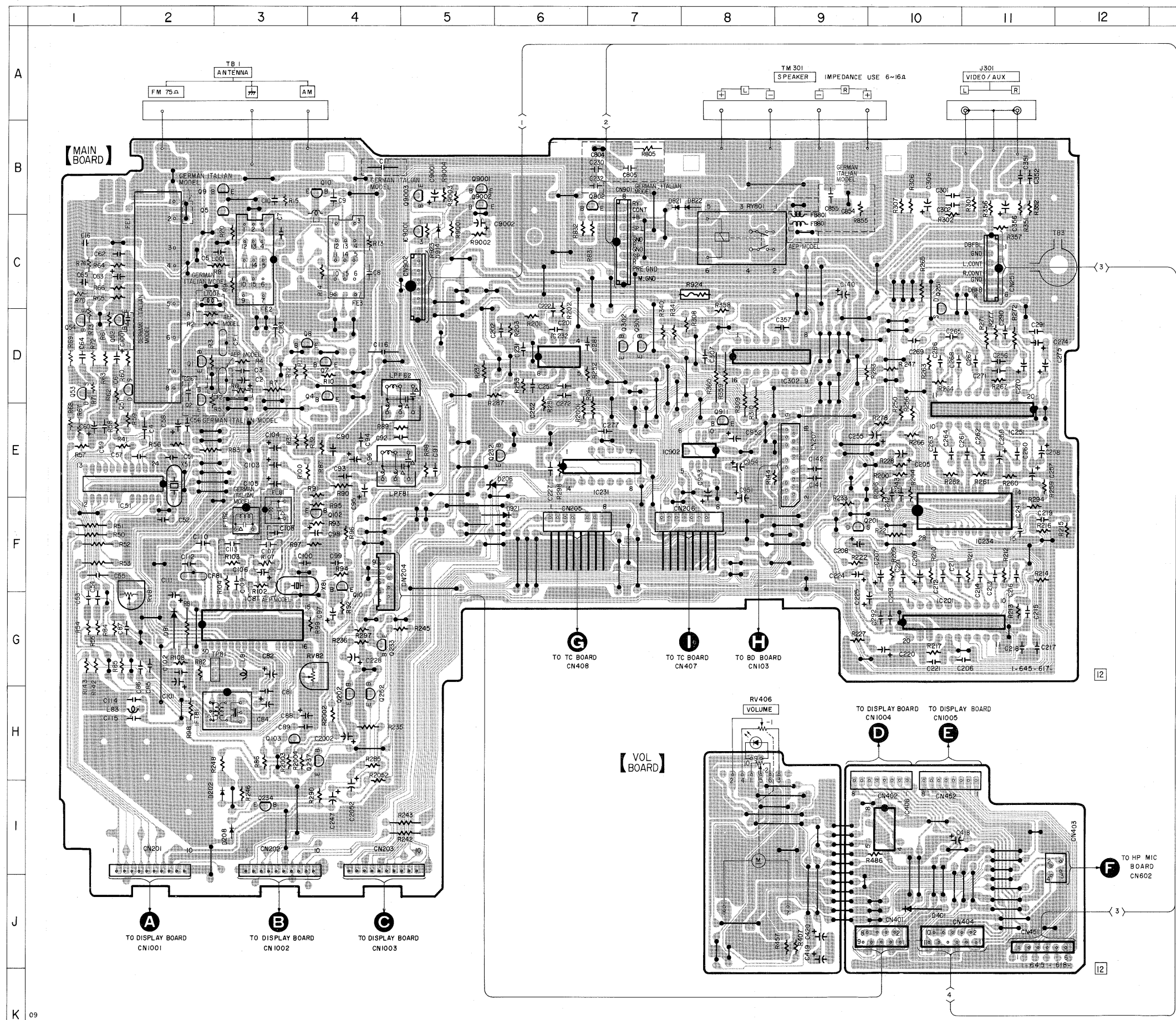
REVISED

7-3. PRINTED WIRING BOARDS—MAIN Section—
• See page 19, 20 for Circuit Boards Location and
Semiconductor Lead Layouts.

• Semiconductor Locator

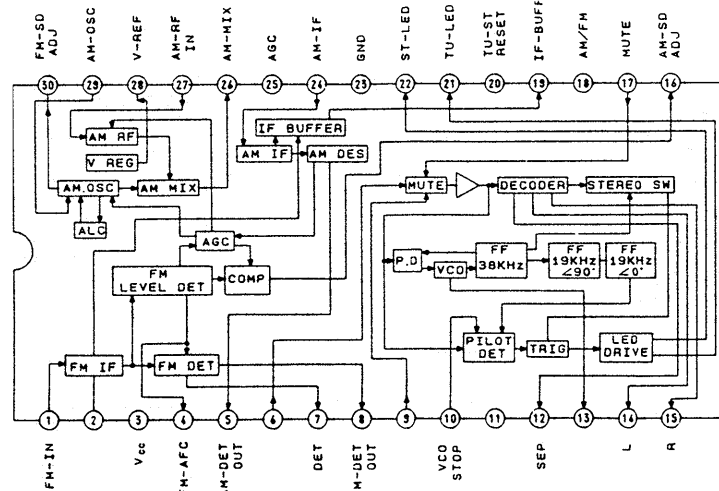
Ref. No.	Location	Ref. No.	Location
D81	G-2	Q1	D-2
D202	I-3	Q2	D-2
D206	E-6	Q4	D-4
D208	I-3	Q5	B-3
D401	J-10	Q7	D-4
D802	E-15	Q8	D-4
D810	I-19	Q9	B-3
D811	B-16	Q10	B-4
D821	B-8	Q51	D-2
D822	B-8	Q52	D-1
D861	B-16	Q53	D-1
D901	G-15	Q54	D-1
D902	G-15	Q101	F-4
D904	B-15	Q102	F-4
D906	I-20	Q103	H-3
D907	I-20	Q201	F-9
D909	B-14	Q202	H-4
D910	E-18	Q232	E-6
D914	C-5	Q233	G-4
D915	J-14	Q234	I-3
D916	I-14	Q237	H-4
D921	F-6	Q251	C-10
D923	G-15	Q252	H-4
D924	G-15	Q301	D-7
D931	I-16	Q302	D-7
D932	I-15	Q801	B-7
D933	I-16	Q802	B-7
D934	I-15	Q811	C-16
		Q861	C-15
IC51	F-2	Q901	E-20
IC81	G-3	Q903	B-19
IC201	G-10	Q904	B-19
IC231	E-7	Q905	B-14
IC232	D-6	Q906	B-15
IC234	F-11	Q907	B-14
IC251	E-11	Q908	I-20
IC302	D-9	Q911	E-8
IC406	I-10	Q9001	B-5
IC801	B-17	Q9002	B-5
IC851	E-15	Q9003	B-5
IC901	E-19		
IC902	E-8		
IC9001	C-5		

Note:
• — : parts extracted from the component side.
• — : parts extracted from the conductor side.

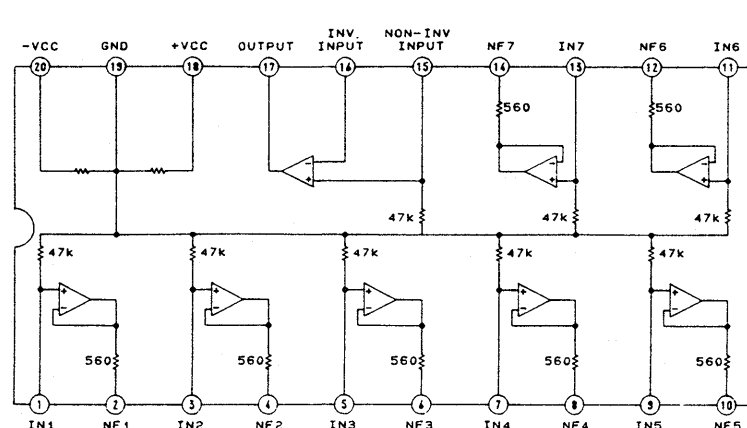


• IC Block Diagrams

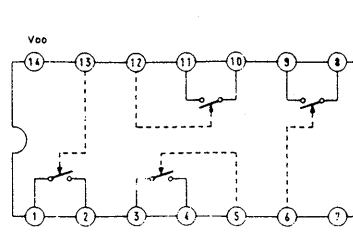
• IC81 LA1851N



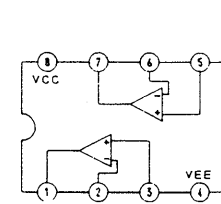
• IC201, 205 M5229P-G



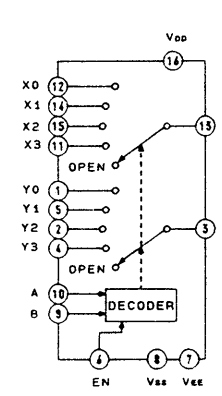
• IC231 MC1406BCP



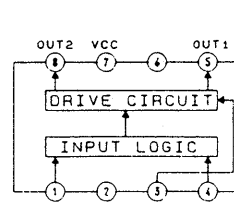
• IC232 M5218AP



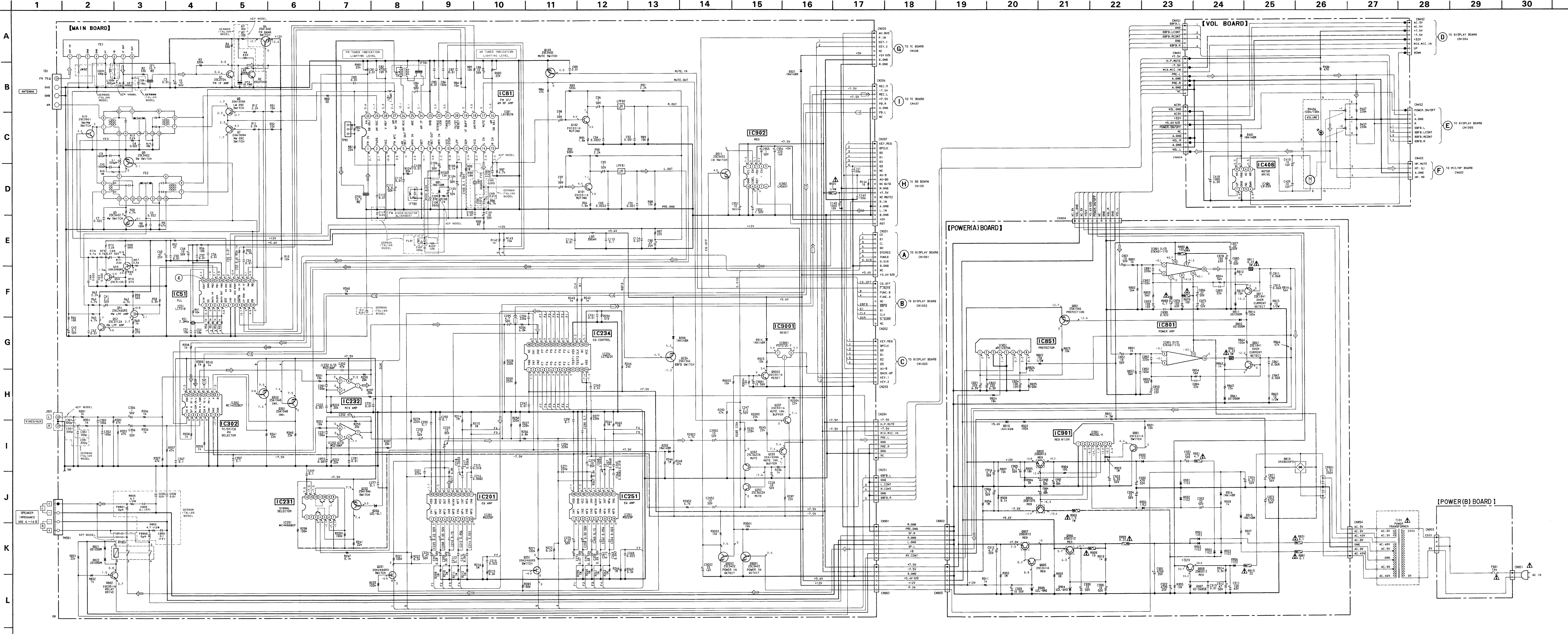
• IC302 MC14052BCP



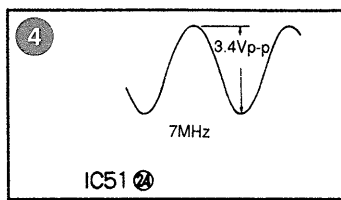
• IC406 LB1639



7-4. SCHEMATIC DIAGRAMS—MAIN Section—



• Wave forms

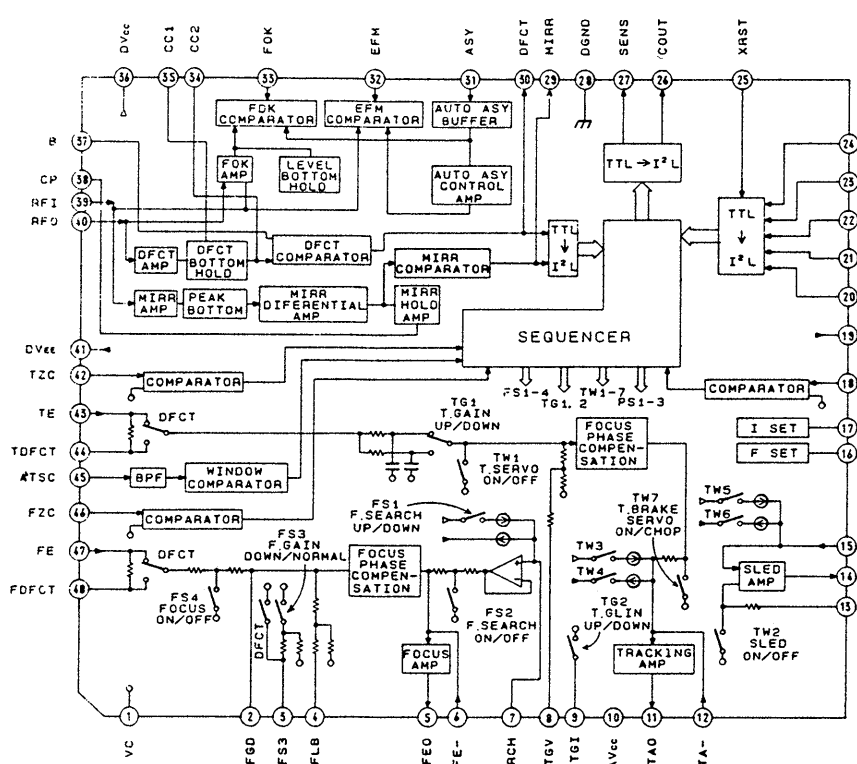


Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- Note:
- All capacitors are in μ F unless otherwise noted. pF: μ F 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4W or less unless otherwise specified.
 - Δ : internal component.
 - ∇ : nonflammable resistor.
 - ∇ : fusible resistor.
 - ∇ : B-Line.
 - ∇ : adjustment for repair.
 - Readings are taken with a non-signal.
 - Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
 - All voltages are in V.
 - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path: $\rightarrow$ FM, $\rightarrow$ PB (DECK A), $\rightarrow$ REC (DECK B).

HCD-H900

- IC Block Diagrams
- IC101 CXA1372AQ (BD board)

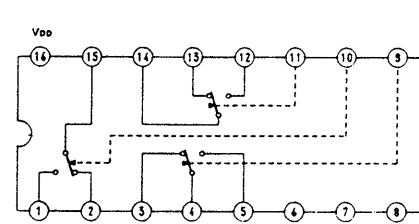


• Semiconductor Location

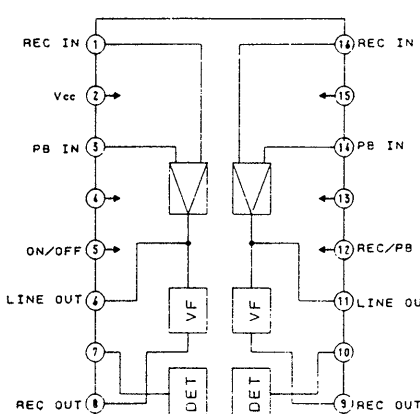
Ref. No.	Location	Ref. No.	Location
D31	C-2	Q51	B-3
D401	G-18	Q52	B-3
D403	F-19	Q53	C-3
D404	G-19	Q71A	C-11
D405	I-16	Q71B	C-5
D407	H-21	Q201	G-20
D410	H-20	Q202	J-21
D411	G-16	Q301	G-20
D416	H-17	Q302	J-22
D1501	A-20	Q401	F-17
D1502	A-20	Q402	G-18
D1503	A-22	Q403	G-18
D1504	A-23	Q404	F-19
D1506	A-15	Q405	H-16
D1507	A-17	Q406	I-18
D1508	A-17	Q407	H-17
D1509	A-15	Q408	I-18
D4001	I-16	Q409	F-19
		Q410	F-19
		Q411	F-21
IC31A	D-9	Q412	G-20
IC31B	D-3	Q414	H-17
IC81A	I-11	Q415	I-18
IC81B	I-5		
IC201	G-21		
IC202	I-20		
IC203	I-21		
IC204	I-21		
IC205	H-19		
IC401	G-17		
IC402	F-17		
IC403	H-21		
IC404	G-15		
IC415	H-18		

Note:
○ : parts extracted from the component side.
● : parts extracted from the conductor side.
■ : parts mounted on the conductor side.
+ : indicates side identified with part number.

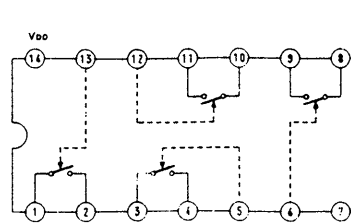
- IC201 MC14053BF



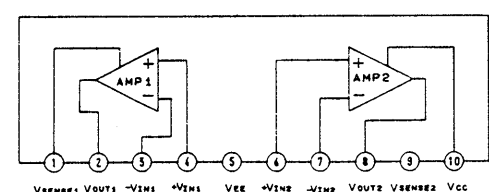
- IC202 CXA1101M



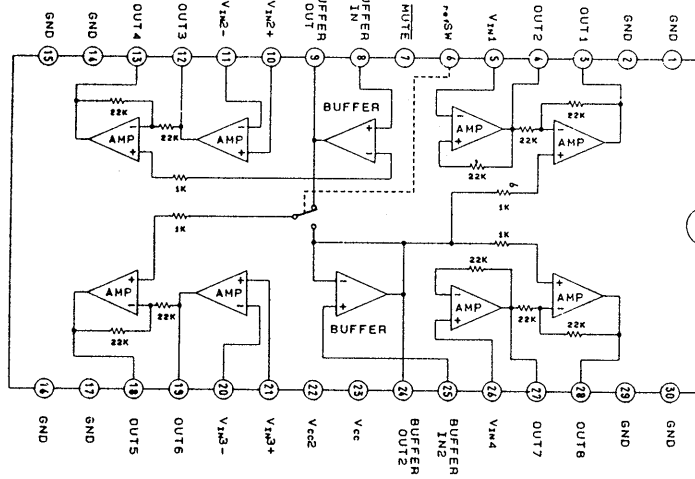
- IC204 CD4066BCM



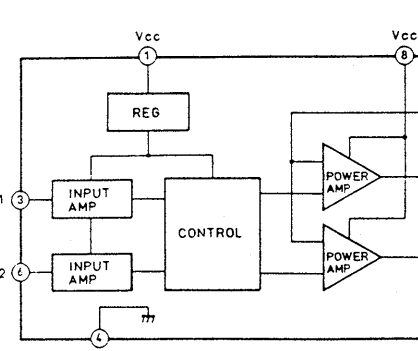
- IC402 TA7272P



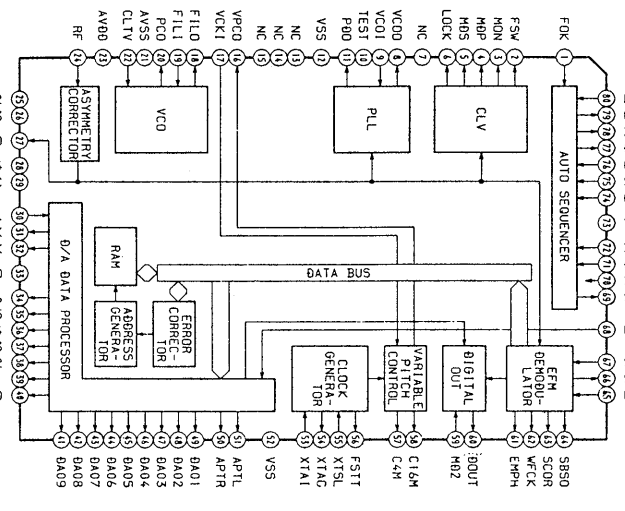
- IC102 LA6525M (BD board)



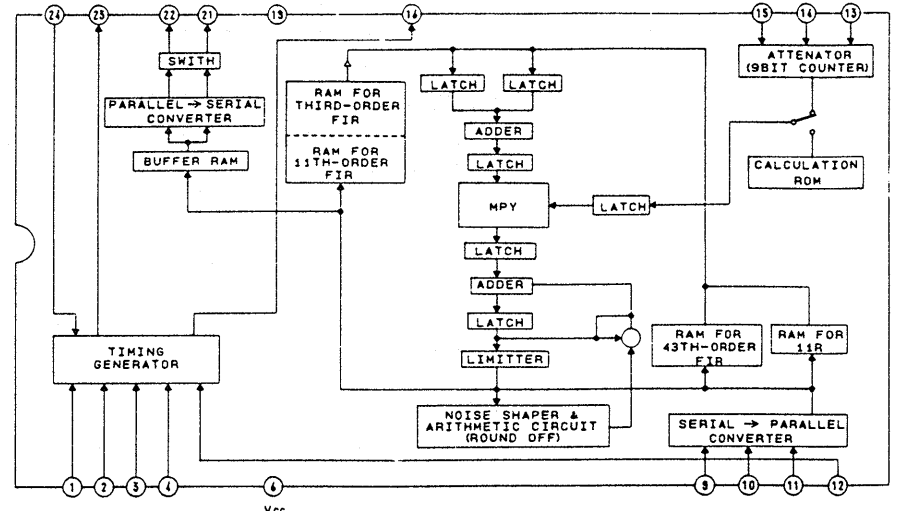
- IC103 M54641FP (BD board)



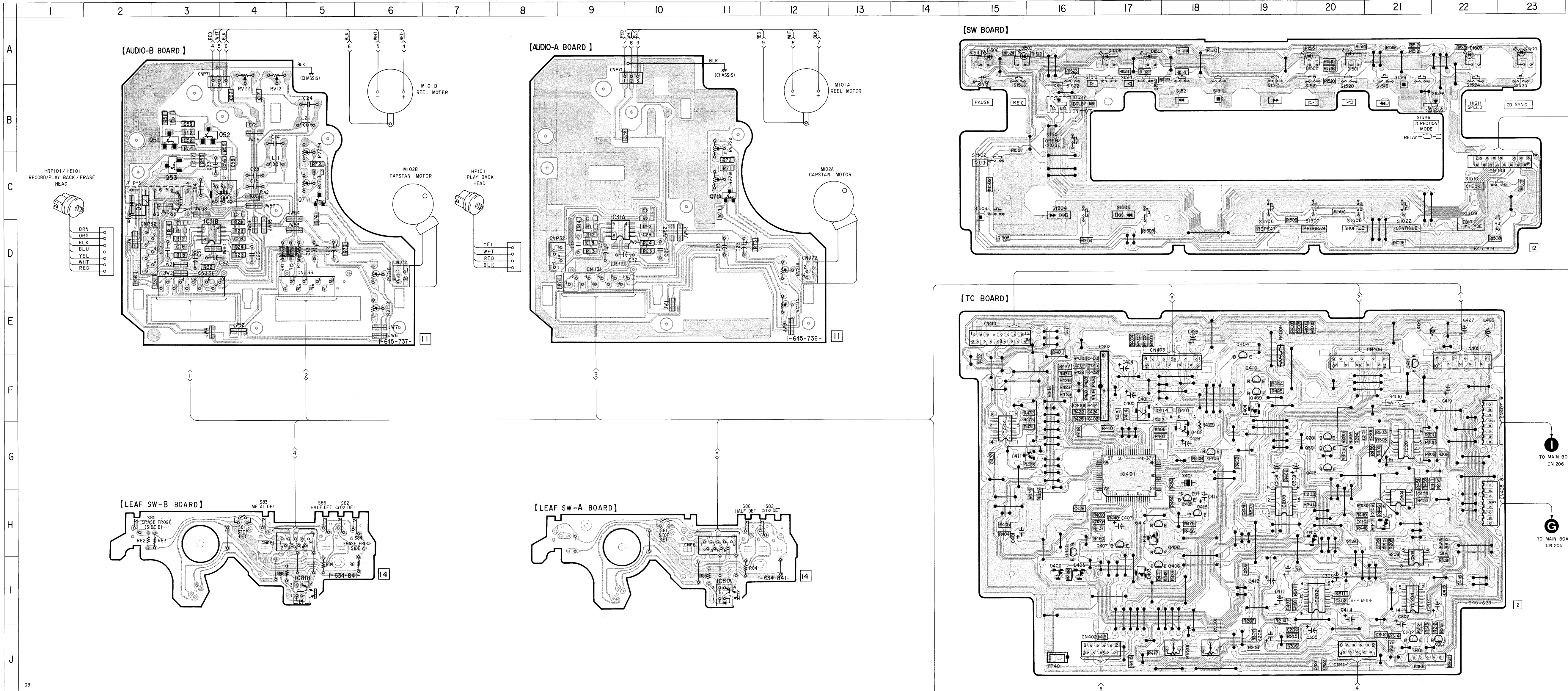
- IC201 CXD2500BQ (BD board)



- IC203 MSM6538-01GS (BD board)

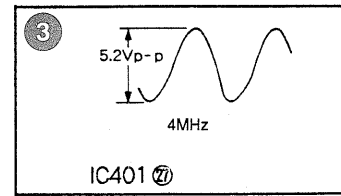


7-5. PRINTED WIRING BOARDS —TC Section— • See page 19, 20 for Circuit Boards Location and Semiconductor Lead Layouts.



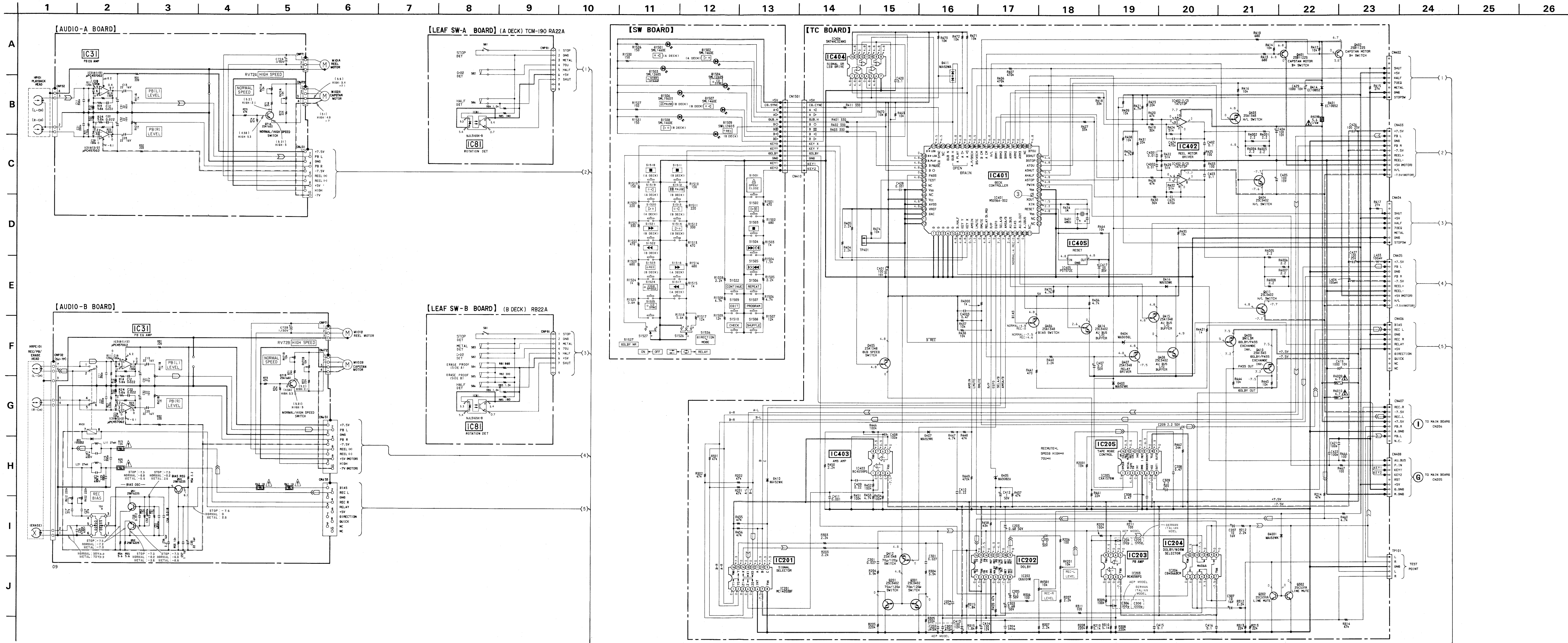
7-6. SCHEMATIC DIAGRAMS—TC Section—

• Wave forms



Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- Note:
- All capacitors are in μF unless otherwise noted. μF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4W or less unless otherwise specified.
 - Δ : internal component.
 - ∇ : nonflammable resistor.
 - ∇ : fusible resistor.
 - ∇ : B-Line
 - ∇ : B-Line
 - ∇ : adjustment for repair.
 - Readings are taken with a non-signal.
 - Voltages are taken with a VOM (Input Impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
 - All voltages are in V.
 - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path.
 - ∇ : PB(Deck A) ∇ : REC(Deck B)
 - ∇ : PB(Deck B)



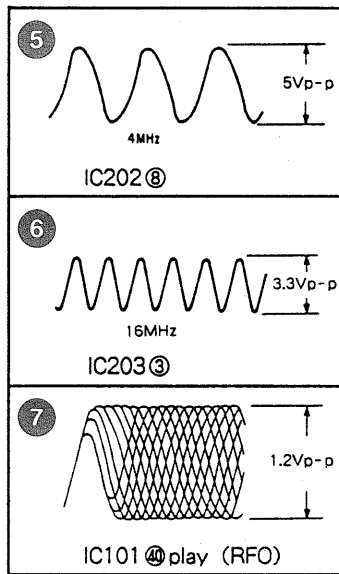
Ref. No.	Location
D101	D-4
D201	D-3
D1001	B-9
D1002	D-10
D1004	B-17
D1005	B-9
D1007	E-10
D1030	D-11
D1031	D-12
D1051	D-10
D1052	D-11
D1053	D-11
D1054	D-11
D1055	D-12
D1058	D-9
D1059	E-9
IC101	B-4
IC102	C-4
IC103	D-4
IC106	B-15
IC201	H-4
IC202	C-2
IC203	H-3
IC301	G-3
IC302	F-2
IC501	E-14
IC602	G-17
IC1001	B-14
IC1002	B-10
IC1003	E-11
IC1004	D-11
IC1005	B-16
IC1006	B-12
IC1007	B-11
Q101	B-2
Q201	G-3
Q601	D-13
Q602	I-18
Q1001	E-10
Q1002	D-10
Q1003	D-10
Q1051	C-16

[illegible]

—45—

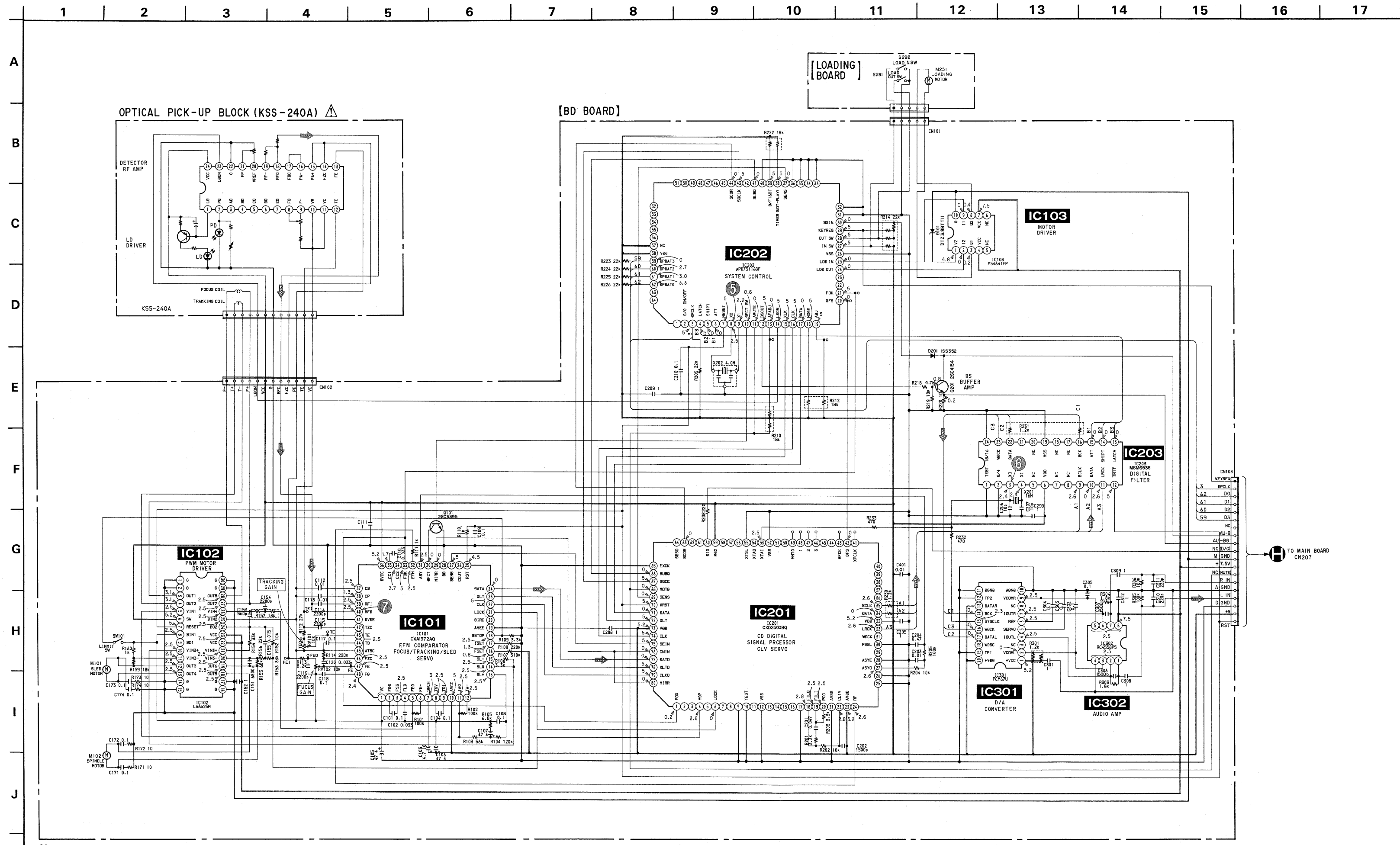
7-9. SCHEMATIC DIAGRAMS—CD Section—

• Wave forms



Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- Note:
- All capacitors are in μ F unless otherwise noted. pF: μ F 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4W or less unless otherwise specified.
 - Δ : internal component.
 - $\square$: nonflammable resistor.
 - $\sim$: fusible resistor.
 - --- : B-Line.
 - --- : B-Line.
 - --- : adjustment for repair.
 - Readings are taken with a non-signal.
 - Voltages are taken with a VOM (Input Impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
 - All voltages are in V.
 - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path.
 - --- : CD



SECTION 8

EXPLODED VIEWS

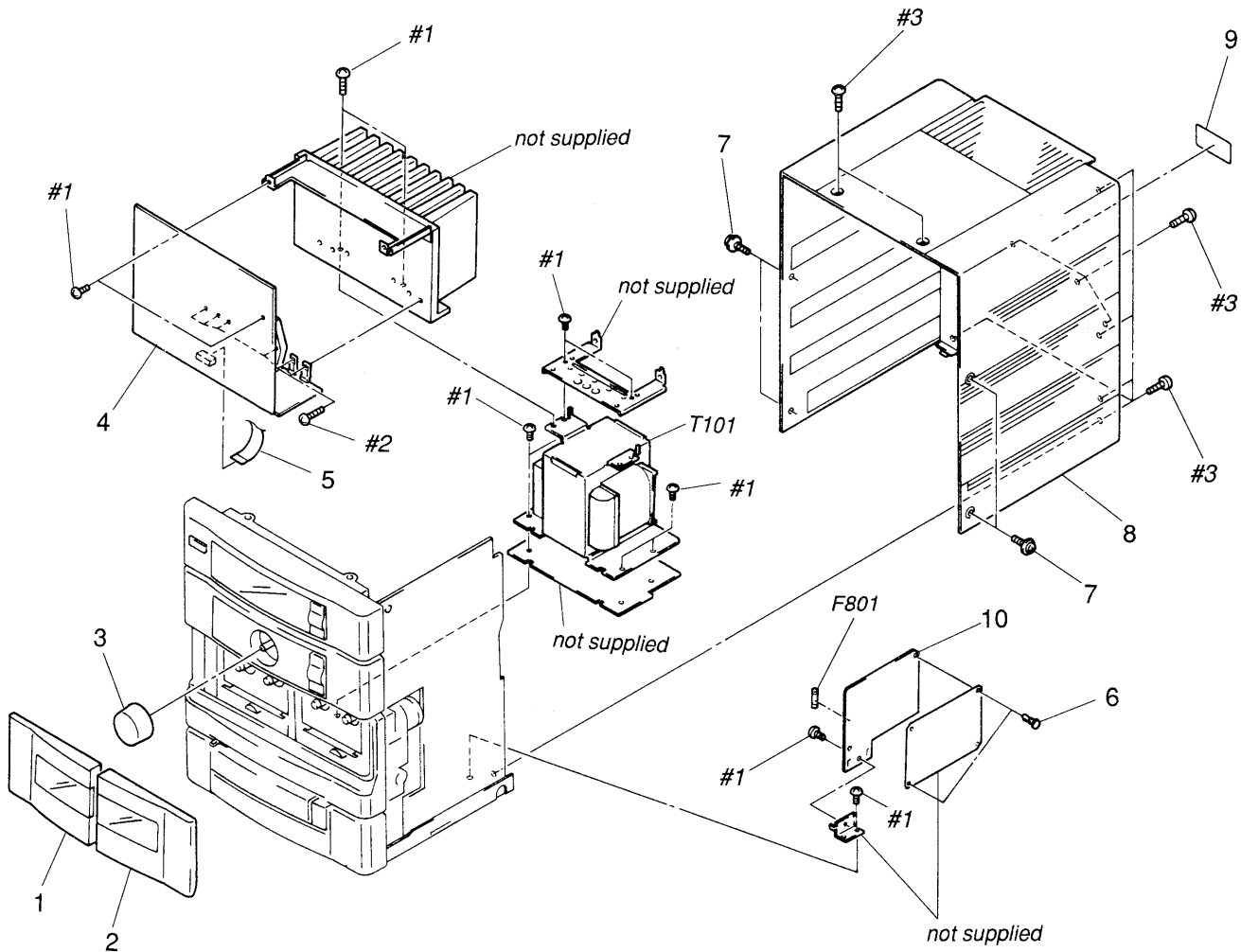
NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- Germany model is abbreviated as G, and also Italian model is IT.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

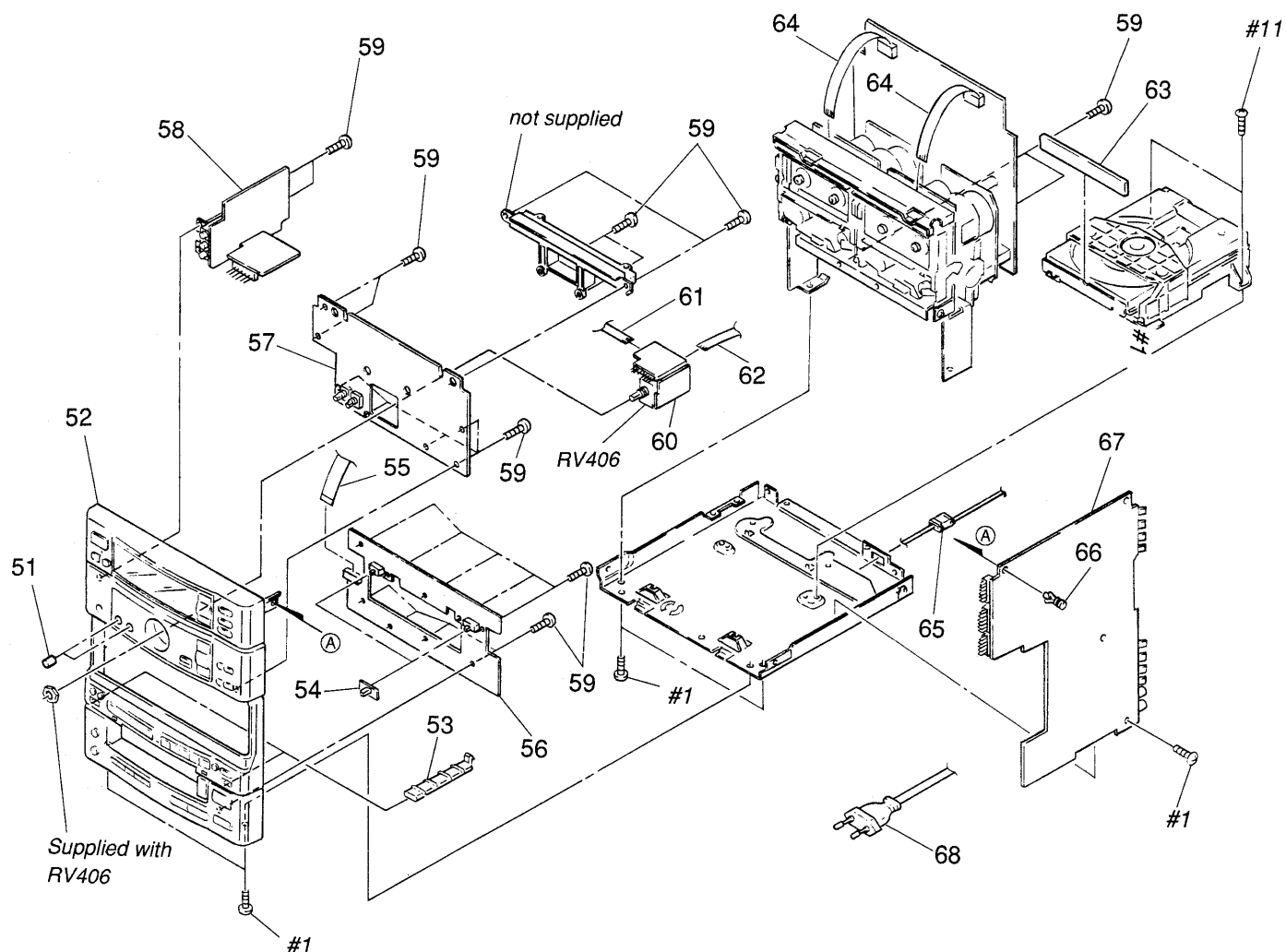
8-1. CASE, POWER SECTION



Ref. No.	Part No.	Description
1	X-4942-643-1	LID (A) ASSY, CASSETTE
2	X-4942-644-1	LID (B) ASSY, CASSETTE
3	X-4942-657-1	KNOB (VOLUME) ASSY
* 4	A-4356-956-A	POWER BOARD, COMPLETE (AEP)
* 4	A-4356-964-A	POWER BOARD, COMPLETE (G, IT)
5	1-690-997-11	WIRE (FLAT TYPE) (11 CORE)
6	3-531-576-11	RIVET

Remark	Ref. No.	Part No.	Description	Remark
	7	3-704-366-01	SCREW (CASE) (M3X8)	
	* 8	4-953-983-11	CASE	
	* 9	4-941-548-01	LABEL, CLASS 1	
	* 10	1-645-622-12	POWER BOARD	
		F801	1-532-203-00 FUSE (T2A, 250V)	
		T101	1-423-424-11 TRANSFORMER, POWER	

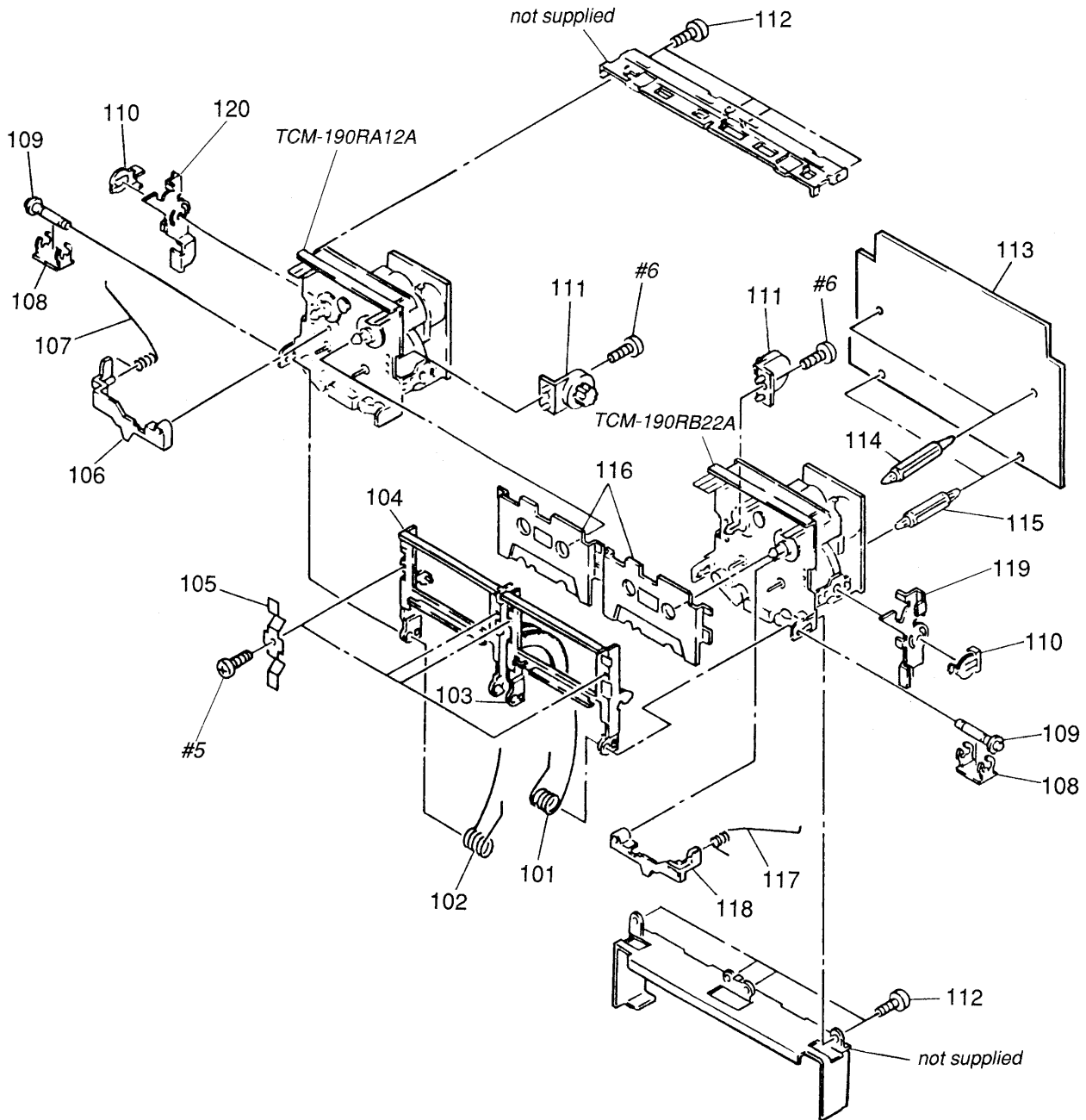
8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description
51	4-952-011-11	KNOB (DBFB/BALANCE)
52	X-4943-254-1	PANEL ASSY, FRONT
53	4-951-982-01	BUTTON (TC-E)
54	4-951-985-01	KNOB (SLIDE)
55	1-690-854-21	WIRE (FLAT TYPE) (16 CORE)
* 56	A-4356-381-A	SWITCH BOARD, COMPLETE (AEP)
* 56	A-4356-961-A	SWITCH BOARD, COMPLETE (G, IT)
* 57	A-4356-957-A	DISPLAY BOARD, COMPLETE (AEP)
* 57	A-4356-965-A	DISPLAY BOARD, COMPLETE (G)
* 57	A-4356-966-A	DISPLAY BOARD, COMPLETE (IT)
* 58	A-4356-379-A	MIC HP BOARD, COMPLETE (AEP)
* 58	A-4356-960-A	MIC HP BOARD, COMPLETE (G, IT)
59	4-951-620-01	SCREW (2.6X8), +BVP
* 60	1-645-618-12	VOL BOARD

Ref. No.	Part No.	Description	Remark
61	1-690-996-11	WIRE (FLAT TYPE) (4 CORE)	
* 62	1-590-240-11	WIRE, FLAT TYPE (9 CORE)	
63	4-951-984-01	PANEL (LOADING)	
64	1-690-588-31	WIRE, FLAT TYPE (9 CORE)	
* 65	3-703-244-00	BUSHING (2104), CORD (AEP, G)	
* 65	3-703-571-11	BUSHING (S) (4516), CORD (IT)	
66	4-812-134-00	RIVET NYLON, 3.5	
* 67	A-4356-954-A	MAIN BOARD, COMPLETE (AEP)	
* 67	A-4356-959-A	MAIN BOARD, COMPLETE (G, IT)	
△ 68	1-590-042-11	CORD, POWER (WITH CORE) (G, IT)	
△ 68	1-696-169-11	CORD, POWER (AEP)	
RV406	1-241-998-11	RES, VAR, CARBON 100K/100K (VOLUME)	

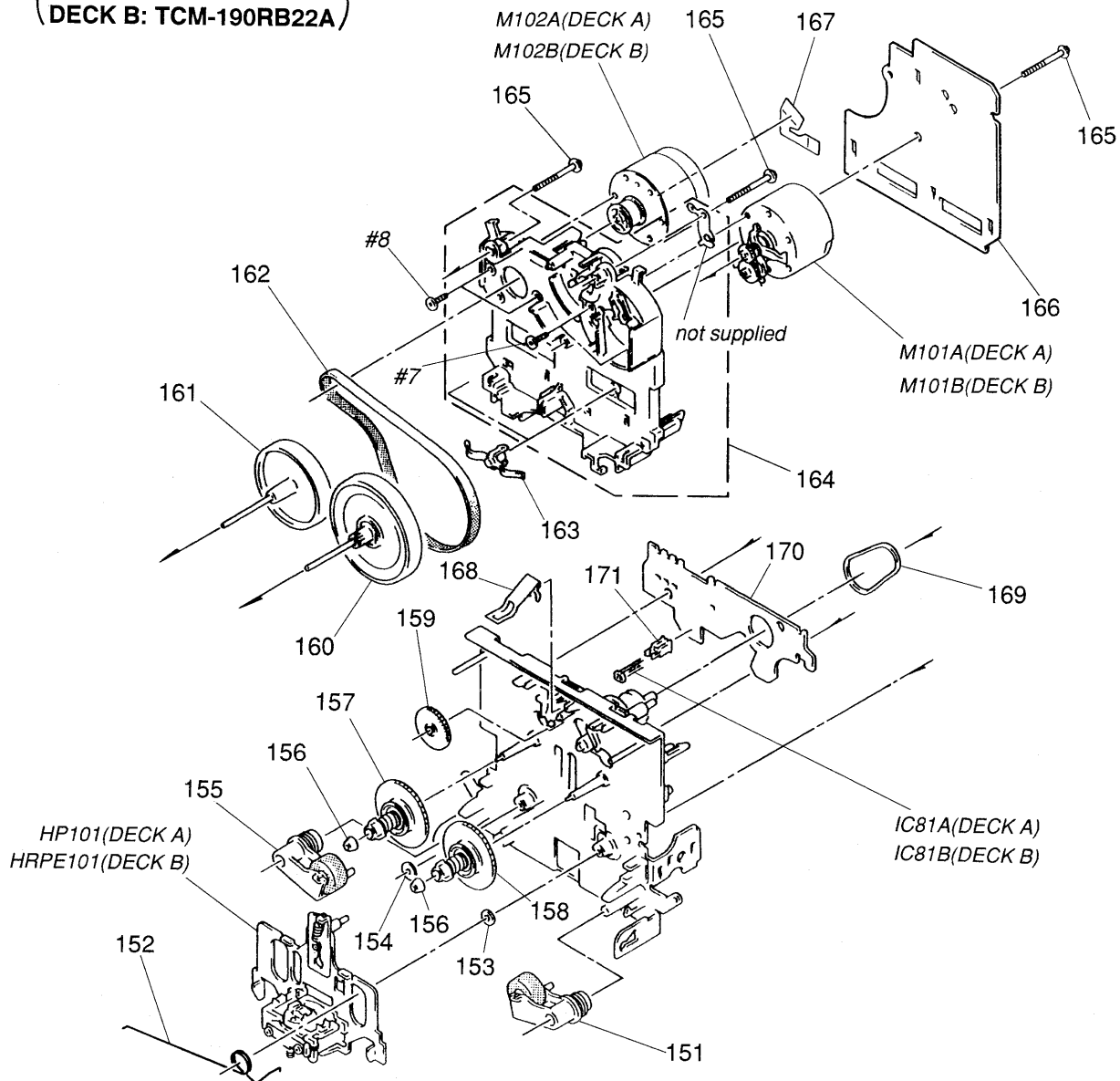
8-3. MECHANISM DECK CHASSIS SECTION



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
101	3-354-960-01	SPRING (LOADING R), TORSION		112	4-951-620-01	SCREW (2.6X8), +BVTP	
102	3-354-959-01	SPRING (LOADING L), TORSION		* 113	A-4356-963-A	TC BOARD, COMPLETE (G, IT)	
103	X-3362-856-1	HOLDER (R) ASSY, CASSETTE		* 113	A-4356-383-A	TC BOARD, COMPLETE (AEP)	
104	X-3362-857-1	HOLDER (L) ASSY, CASSETTE		* 114	3-682-419-31	HOLDER, P. C. B	
105	3-340-137-01	SPRING, CASSETTE RETAINER					
106	3-354-955-01	LEVER (EJ SAFTY LEVER L)		* 115	3-682-419-21	HOLDER, P. C. B	
107	3-354-961-01	SPRING (EJ SAFTY SPRING L)		116	3-367-711-01	RETAINER, CASSETTE	
108	3-367-720-01	RING (W), RETAINING		117	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
109	3-367-721-01	SHAFT (FULCRUM SHAFT)		118	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
110	3-354-957-01	JOINT (LOCK LEVER)		* 119	3-367-710-01	LEVER (LOCK LEVER R)	
111	3-354-963-01	DAMPER		* 120	3-367-709-01	LEVER (LOCK LEVER L)	

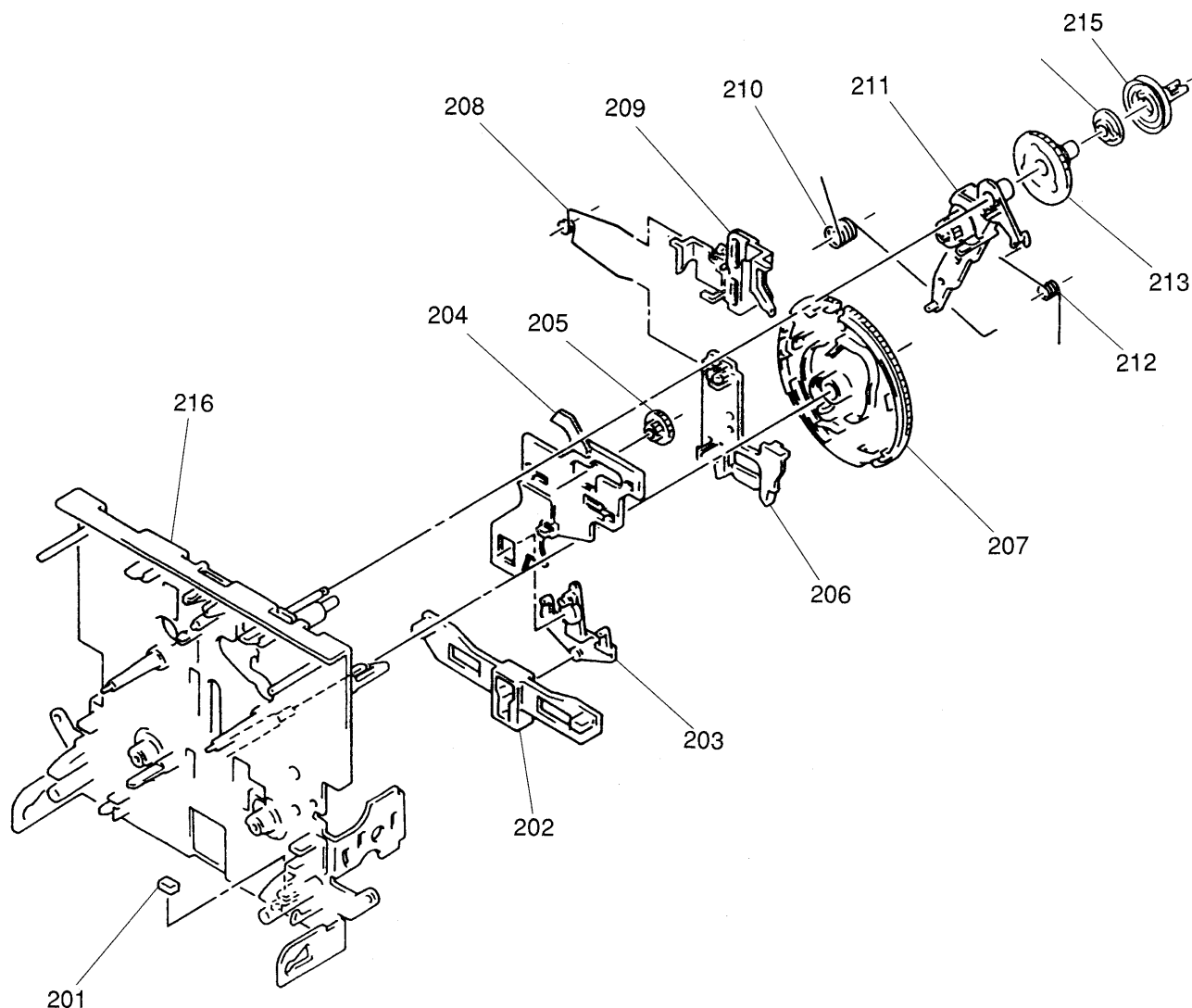
8-4. MECHANISM DECK SECTION-1

(DECK A: TCM-190RA12A)
(DECK B: TCM-190RB22A)



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
151	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY		* 166	A-2006-400-A	AUDIO-B BOARD, COMPLETE (DECK B)	
152	3-359-455-01	SPRING, TORSION		167	1-638-983-11	MOTOR FLEXIBLE BOARD	
153	3-356-713-01	WASHER		168	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
154	3-356-714-01	WASHER		169	3-359-466-01	BELT (FR), SQUARE	
155	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY					
156	3-362-308-01	CAP (REEL)		* 170	1-634-841-14	LEAF SW-A BOARD (DECK A)	
157	X-3362-078-1	TABLE ASSY (B), REEL		* 170	1-634-841-14	LEAF SW-B BOARD (DECK B)	
158	X-3359-404-1	TABLE ASSY, REEL		171	3-343-419-01	HOLDER (S SENSOR A)	
159	3-359-424-01	GEAR (REV GEAR)		HP101	A-2003-837-F	BASE ASSY, HEAD (DECK A)	
160	X-3359-406-1	FLYWHEEL (FWD) ASSY		HRPE101	A-2003-838-A	BASE ASSY, HEAD (DECK B)	
161	X-3359-410-1	FLYWHEEL (REV) ASSY		IC81A	8-719-710-03	PHOTO REFLECTOR NJL5165K-B (DECK A)	
162	3-359-417-01	BELT (FLAT), CAPSTAN		IC81B	8-719-710-03	PHOTO REFLECTOR NJL5165K-B (DECK B)	
163	3-575-321-00	RETAINER, THRUST, CAPSTAN		M101A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)	
* 164	3-359-436-01	BASE (THRUST RETAINER), FITTING		M101B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)	
165	3-359-414-01	SCREW (+PTPHW 2X23)		M102A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	
* 166	A-2006-399-A	AUDIO-A BOARD, COMPLETE (DECK A)		M102B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)	

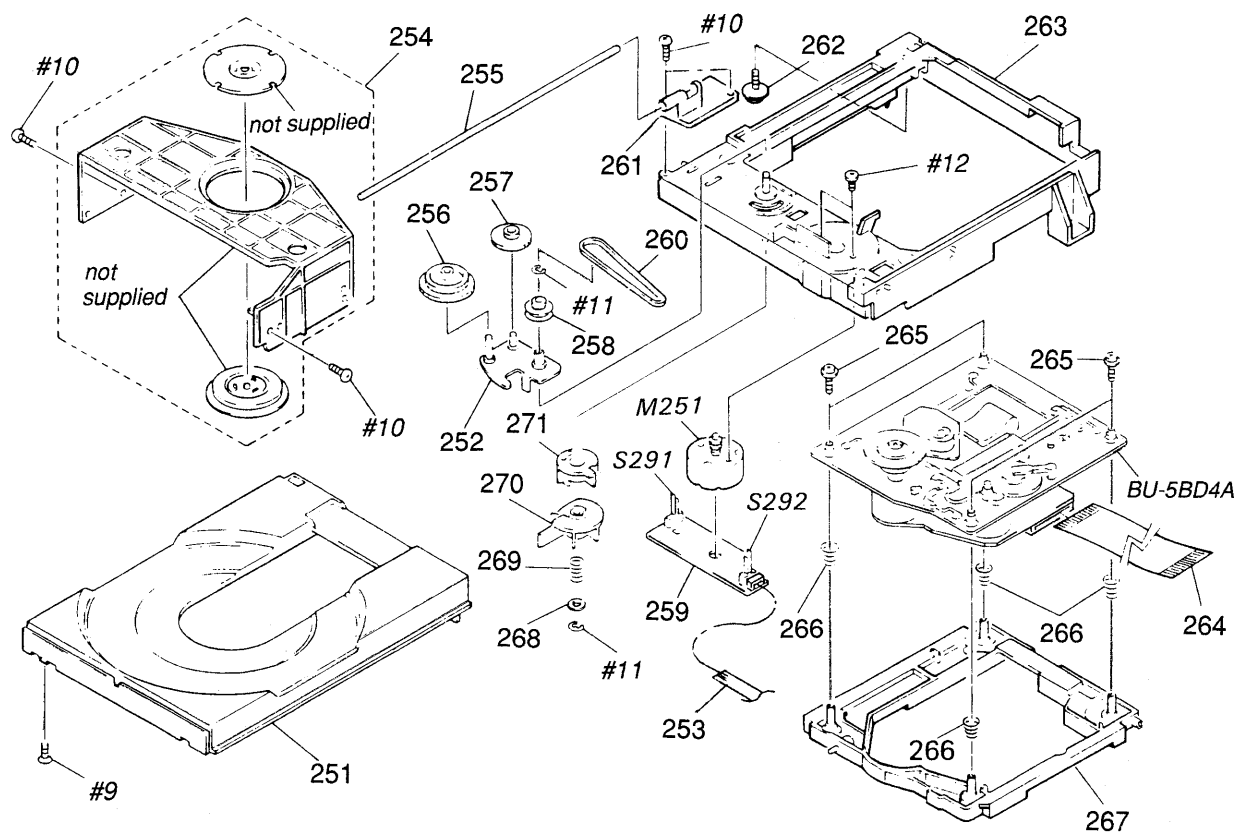
8-5. MECHANISM DECK SECTION-2
(DECK A: TCM-190RA12A)
(DECK B: TCM-190RB22A)



Ref.No.	Part No.	Description
201	3-359-469-01	SPACER
* 202	3-359-425-01	SLIDER (REVERSE SLIDER)
203	3-359-426-01	LEVER (REVERSE LEVER)
* 204	3-359-415-01	SLIDER (TRIGGER SLIDER)
205	3-359-448-01	GEAR (TRIGGER)
* 206	3-359-427-01	SLIDER (LEVERSE SLIDER)
207	3-359-420-01	GEAR (CAM GEAR)
208	3-359-454-01	SPRING, TORSION
209	3-359-429-01	SLIDER (BRAKE PLATE)

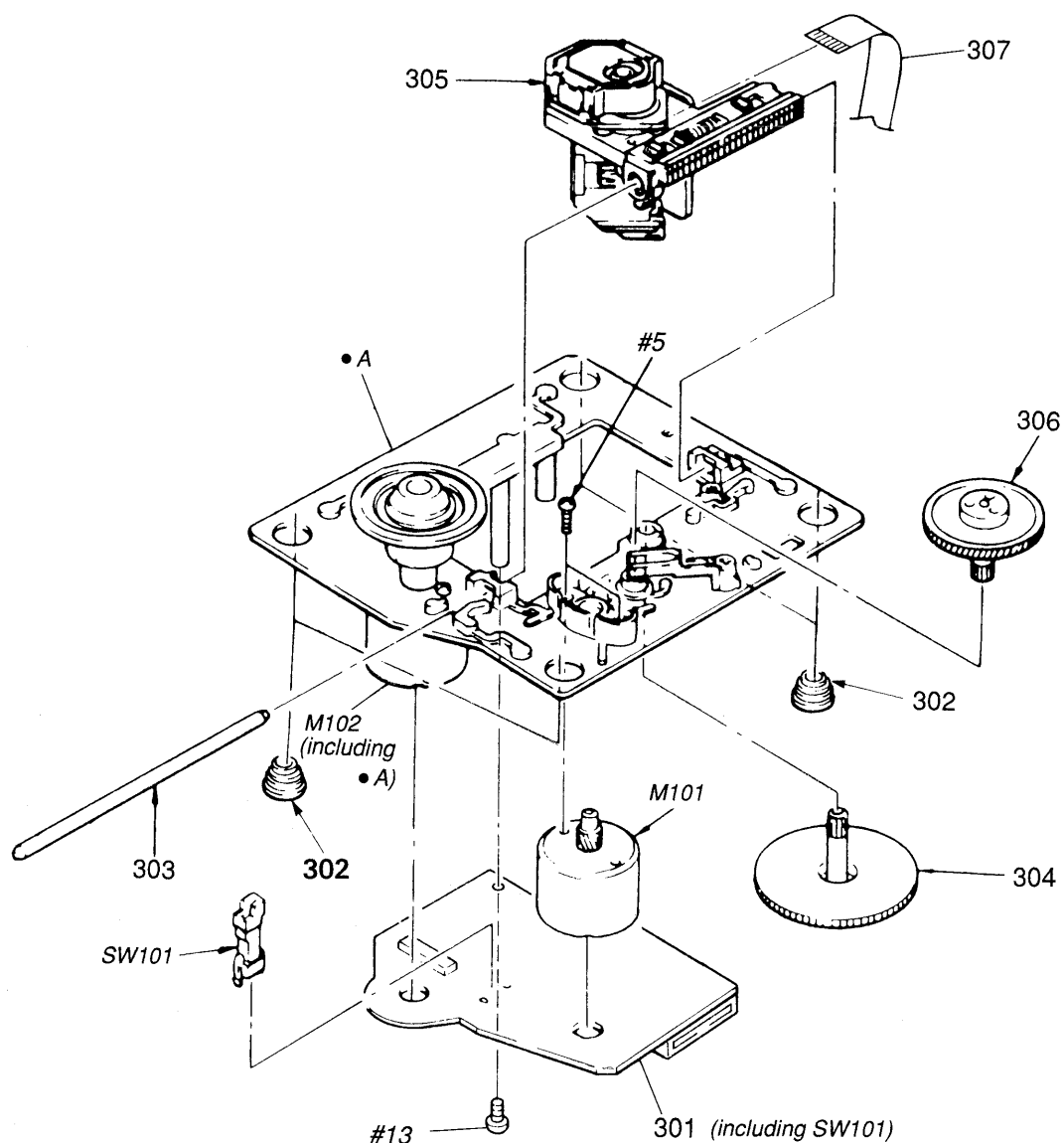
Remark	Ref.No.	Part No.	Description	Remark
	210	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
	211	X-3359-405-1	LEVER (FR ARM) ASSY	
	212	3-359-453-01	SPRING (FR ARM), TORSION	
	213	3-359-419-01	GEAR (FR GEAR)	
	214	3-359-421-01	CLUTCH (REEL DISK)	
	215	3-359-418-01	PULLEY (FR PULLEY)	
	216	X-3363-790-1	CHASSIS ASSY, MECHANICAL	

8-6. CD MECHANISM SECTION-1
(CDM13B-5BD4A)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-944-012-01	TABLE, DISC		263	X-4941-462-1	CHASSIS (MD) ASSY	
252	X-4929-703-1	ARM ASSY, SWING		264	1-690-853-11	WIRE (FLAT TYPE) (19 CORE)	
253	1-590-530-11	WIRE, FLAT TYPE		265	4-933-134-01	SCREW (+PTPWH M2. 6X6)	
254	A-4604-752-A	HOLDER (MG) ASSY		266	4-917-541-01	SPRING (B)	
255	4-929-764-01	SHAFT (TABLE GUIDE)		267	4-929-747-01	HOLDER (BU)	
256	4-927-620-01	GEAR (P)		268	4-927-654-01	WASHER (LIMITER)	
257	4-927-628-01	GEAR (C)		269	3-659-338-00	SPRING, COMPRESSION	
258	4-929-724-01	PULLEY (B)		270	4-929-729-01	CAM (B)	
* 259	1-638-308-11	LOADING BOARD		271	4-929-727-01	CAM (A)	
260	4-927-649-01	BELT		M251	A-4608-362-A	MOTOR (L) ASSY (LOADING)	
261	4-944-006-01	BEARING		S291	1-571-924-12	SWITCH, LEAF (LOAD OUT)	
* 262	4-917-583-21	BRACKET, YOKE		S292	1-571-924-12	SWITCH, LEAF (LOAD IN)	

8-7. CD MECHANISM SECTION-2 (BU-5BD4A)



The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
* 301	A-4617-936-A	BD BOARD, COMPLETE
302	4-933-126-01	INSULATOR (A)
303	4-917-565-01	SHAFT, SLED
304	4-917-564-01	GEAR (P), FLATNESS
 305	8-848-144-11	DEVICE, OPTICAL KSS-240A

Remark	Ref.No.	Part No.	Description	Remark
	306	4-917-567-01	GEAR (M)	
	307	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
	M101	X-4917-504-1	MOTOR ASSY (SLED)	
	M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	
	SW101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

AUDIO-A

AUDIO-B

SECTION 9
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Germany model is abbreviated as G, and also Italian model is IT.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, μ : μ , for example:
uA...: μ A..., uPA...: μ PA...,
uPB...: μ PB..., uPC...: μ PC...,
uPD...: μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2006-399-A	AUDIO-A BOARD, COMPLETE *****		R21	1-216-099-00	METAL CHIP 120K 5% 1/10W	
		< CAPACITOR >		R22	1-216-025-00	METAL CHIP 100 5% 1/10W	
C11	1-163-131-00	CERAMIC CHIP 390PF 5% 50V		R23	1-216-100-00	METAL CHIP 130K 5% 1/10W	
C12	1-136-157-00	FILM 0.022uF 5% 50V		R24	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
C13	1-124-234-00	ELECT 22uF 20% 16V		R31	1-216-033-00	METAL CHIP 220 5% 1/10W	
C18	1-163-117-00	CERAMIC CHIP 100PF 5% 50V		R32	1-216-033-00	METAL CHIP 220 5% 1/10W	
C21	1-163-131-00	CERAMIC CHIP 390PF 5% 50V		R71	1-216-082-00	METAL CHIP 24K 5% 1/10W	
C22	1-136-157-00	FILM 0.022uF 5% 50V		R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	
C23	1-124-234-00	ELECT 22uF 20% 16V		R73	1-216-089-00	METAL CHIP 47K 5% 1/10W	
C28	1-163-117-00	CERAMIC CHIP 100PF 5% 50V		R74	1-216-089-00	METAL CHIP 47K 5% 1/10W	
C31	1-124-234-00	ELECT 22uF 20% 16V				< VARIABLE RESISTOR >	
C32	1-124-234-00	ELECT 22uF 20% 16V		RV11	1-241-627-11	RES, ADJ, CARBON 1K (PB (L) LEVEL)	
C72	1-124-499-11	ELECT, NONPOLAR 1uF 20% 50V		RV21	1-241-627-11	RES, ADJ, CARBON 1K (PB (R) LEVEL)	
		< JACK >		RV71	1-241-630-11	RES, ADJ, CARBON 10K (NORMAL SPEED)	
				RV72	1-241-630-11	RES, ADJ, CARBON 10K (HIGH SPEED)	
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD		*****			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P		*	A-2006-400-A	AUDIO-B BOARD, COMPLETE *****	
		< CONNECTOR >				< CAPACITOR >	
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P		C11	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P		C12	1-136-157-00	FILM 0.022uF 5% 50V	
		< IC >		C13	1-124-234-00	ELECT 22uF 20% 16V	
IC31A	8-759-106-02	IC uPC4570G2		C14	1-136-273-91	FILM 75PF 5% 630V	
		< JUMPER RESISTOR >		C15	1-164-080-11	CERAMIC 390PF 10% 50V	
JW1	1-216-295-00	METAL CHIP 0 5% 1/10W		C17	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
JW51	1-216-296-00	METAL CHIP 0 5% 1/8W		C18	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
JW52	1-216-296-00	METAL CHIP 0 5% 1/8W		C21	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
JW53	1-216-296-00	METAL CHIP 0 5% 1/8W		C22	1-136-157-00	FILM 0.022uF 5% 50V	
JW54	1-216-296-00	METAL CHIP 0 5% 1/8W		C23	1-124-234-00	ELECT 22uF 20% 16V	
		< TRANSISTOR >		C24	1-136-273-91	FILM 75PF 5% 630V	
Q71A	8-729-602-36	TRANSISTOR 2SA1602		C25	1-164-080-11	CERAMIC 390PF 10% 50V	
		< RESISTOR >		C27	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
R11	1-216-099-00	METAL CHIP 120K 5% 1/10W		C28	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
R12	1-216-025-00	METAL CHIP 100 5% 1/10W		C31	1-124-234-00	ELECT 22uF 20% 16V	
R13	1-216-100-00	METAL CHIP 130K 5% 1/10W		C32	1-124-234-00	ELECT 22uF 20% 16V	
R14	1-216-067-00	METAL CHIP 5.6K 5% 1/10W		C33	1-124-234-00	ELECT 22uF 20% 16V	
				C51	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
				C52	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
				C53	1-163-022-00	CERAMIC CHIP 0.012uF 10% 50V	
				C54	1-136-559-11	FILM 0.0047uF 5% 630V	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V	< RESISTOR >			
C57	1-164-346-11	CERAMIC CHIP 1uF	16V	R11	1-216-099-00	METAL CHIP 120K 5%	1/10W
C58	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V	R12	1-216-025-00	METAL CHIP 100 5%	1/10W
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V	R13	1-216-100-00	METAL CHIP 130K 5%	1/10W
< JACK >				R14	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD		R15	1-249-430-11	CARBON 12K 5%	1/4W
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD		R21	1-216-099-00	METAL CHIP 120K 5%	1/10W
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P		R22	1-216-025-00	METAL CHIP 100 5%	1/10W
< CONNECTOR >				R23	1-216-100-00	METAL CHIP 130K 5%	1/10W
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P		R24	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P		R25	1-249-430-11	CARBON 12K 5%	1/4W
< DIODE >				R31	1-216-033-00	METAL CHIP 220 5%	1/10W
D31 A	8-719-016-74	DIODE 1SS352		R32	1-216-033-00	METAL CHIP 220 5%	1/10W
< IC >				△R41	1-249-393-11	CARBON 10 5%	1/4W F
IC31	8-759-106-02	IC uPC4570G2		△R42	1-249-393-11	CARBON 10 5%	1/4W F
< JUMPER RESISTOR >				R51	1-216-075-00	METAL CHIP 12K 5%	1/10W
JW1	1-216-296-00	METAL CHIP 0 5%	1/8W	R52	1-216-075-00	METAL CHIP 12K 5%	1/10W
JW2	1-216-295-00	METAL CHIP 0 5%	1/10W	R53	1-216-073-00	METAL CHIP 10K 5%	1/10W
JW3	1-216-295-00	METAL CHIP 0 5%	1/10W	R54	1-216-309-00	METAL CHIP 5.6 5%	1/10W
JW4	1-216-295-00	METAL CHIP 0 5%	1/10W	R55	1-216-309-00	METAL CHIP 5.6 5%	1/10W
JW6	1-216-295-00	METAL CHIP 0 5%	1/10W	R56	1-216-298-00	METAL CHIP 2.2 5%	1/10W
JW7	1-216-295-00	METAL CHIP 0 5%	1/10W	R71	1-216-082-00	METAL CHIP 24K 5%	1/10W
JW52	1-216-296-00	METAL CHIP 0 5%	1/8W	R72	1-216-081-00	METAL CHIP 22K 5%	1/10W
JW53	1-216-296-00	METAL CHIP 0 5%	1/8W	R73	1-216-089-00	METAL CHIP 47K 5%	1/10W
JW54	1-216-296-00	METAL CHIP 0 5%	1/8W	R74	1-216-089-00	METAL CHIP 47K 5%	1/10W
JW55	1-216-296-00	METAL CHIP 0 5%	1/8W	< VARIABLE RESISTOR >			
JW56	1-216-296-00	METAL CHIP 0 5%	1/8W	RV11	1-241-627-11	RES, ADJ, CARBON 1K (PB (L) LEVEL)	
JW57	1-216-296-00	METAL CHIP 0 5%	1/8W	RV12	1-238-551-11	RES, ADJ, CARBON 220K (REC BIAS (L))	
JW58	1-216-296-00	METAL CHIP 0 5%	1/8W	RV21	1-241-627-11	RES, ADJ, CARBON 1K (PB (R) LEVEL)	
JW59	1-216-296-00	METAL CHIP 0 5%	1/8W	RV22	1-238-551-11	RES, ADJ, CARBON 220K (REC BIAS (R))	
JW60	1-216-296-00	METAL CHIP 0 5%	1/8W	RV71	1-241-630-11	RES, ADJ, CARBON 10K (NORMAL SPEED)	
JW61	1-216-296-00	METAL CHIP 0 5%	1/8W	RV72	1-241-630-11	RES, ADJ, CARBON 10K (HIGH SPEED)	
< COIL >				< RELAY >			
L11	1-410-780-11	INDUCTOR 27mH		RY31	1-515-913-11	RELAY	
L21	1-410-780-11	INDUCTOR 27mH		< TRANSFORMER >			
< TRANSISTOR >				T51	1-406-419-11	COIL, BIAS OSCILLATION	
Q51	8-729-808-01	TRANSISTOR 2SD1622-S		*****			
Q52	8-729-808-01	TRANSISTOR 2SD1622-S		*	A-4617-936-A	BD BOARD, COMPLETE	
Q53	8-729-808-01	TRANSISTOR 2SD1622-S		*****			
Q71 B	8-729-602-36	TRANSISTOR 2SA1602		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C102	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C103	1-135-155-21	TANTALUM CHIP 4.7uF	10% 16V	C104	1-163-038-00	CERAMIC CHIP 0.1uF	25V

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C105	1-126-607-11	ELECT CHIP	47uF 20% 4V	< CONNECTOR >			
C106	1-126-607-11	ELECT CHIP	47uF 20% 4V	CN101	1-580-858-11	SOCKET, CONNECTOR (SMT) 5P	
C107	1-126-607-11	ELECT CHIP	47uF 20% 4V	CN102	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P	
C108	1-163-038-00	CERAMIC CHIP	0.1uF 25V	CN103	1-580-872-41	SOCKET, CONNECTOR (SMT) 19P	
C109	1-163-038-00	CERAMIC CHIP	0.1uF 25V	< DIODE >			
C110	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V	D101	8-719-422-12	DIODE MA8039	
C111	1-164-346-11	CERAMIC CHIP	1uF 16V	D201	8-719-016-74	DIODE 1SS352	
C112	1-164-232-11	CERAMIC CHIP	0.01uF 50V	< IC >			
C113	1-164-232-11	CERAMIC CHIP	0.01uF 50V	IC101	8-752-053-73	IC CXA1372AQ	
C114	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	IC102	8-759-823-48	IC LA6525M	
C115	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	IC103	8-759-636-20	IC M54641FP	
C117	1-163-038-00	CERAMIC CHIP	0.1uF 25V	IC201	8-752-352-93	IC CXD2500BQ	
C118	1-163-038-00	CERAMIC CHIP	0.1uF 25V	IC202	8-759-059-86	IC uPD75116GF-F21-3BE	
C119	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	IC203	8-759-098-27	IC MSM6538-01GS-VKR1	
C120	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V	IC301	8-759-155-52	IC PCM-67U-T1B	
C151	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V	IC302	8-759-996-43	IC RC4558PS	
C152	1-164-346-11	CERAMIC CHIP	1uF 16V	< MOTOR >			
C153	1-163-135-00	CERAMIC CHIP	560PF 5% 50V	M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	
C154	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	< TRANSISTOR >			
C155	1-163-023-00	CERAMIC CHIP	0.015uF 5% 50V	Q101	8-729-805-45	TRANSISTOR 2SC3395	
C171	1-163-038-00	CERAMIC CHIP	0.1uF 25V	Q201	8-729-602-21	TRANSISTOR 2SC4154	
C172	1-163-038-00	CERAMIC CHIP	0.1uF 25V	< RESISTOR >			
C173	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R101	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C174	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R102	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C201	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V	R103	1-216-091-00	METAL CHIP 56K 5% 1/10W	
C202	1-163-145-00	CERAMIC CHIP	0.0015uF 5% 50V	R104	1-216-099-00	METAL CHIP 120K 5% 1/10W	
C203	1-164-232-11	CERAMIC CHIP	0.01uF 50V	R105	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
C204	1-164-005-11	CERAMIC CHIP	0.47uF 25V	R106	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C205	1-164-346-11	CERAMIC CHIP	1uF 16V	R107	1-216-114-00	METAL CHIP 510K 5% 1/10W	
C206	1-163-093-00	CERAMIC CHIP	10PF 5% 50V	R108	1-216-105-00	METAL CHIP 220K 5% 1/10W	
C207	1-163-093-00	CERAMIC CHIP	10PF 5% 50V	R109	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C208	1-164-346-11	CERAMIC CHIP	1uF 16V	R110	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C209	1-164-346-11	CERAMIC CHIP	1uF 16V	R111	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C210	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R112	1-216-083-00	METAL CHIP 27K 5% 1/10W	
C299	1-164-346-11	CERAMIC CHIP	1uF 16V	R113	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
C301	1-164-346-11	CERAMIC CHIP	1uF 16V	R114	1-216-105-00	METAL CHIP 220K 5% 1/10W	
C302	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R152	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C303	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R153	1-216-085-00	METAL CHIP 33K 5% 1/10W	
C304	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R154	1-216-085-00	METAL CHIP 33K 5% 1/10W	
C305	1-163-038-00	CERAMIC CHIP	0.1uF 25V	R155	1-216-093-00	METAL CHIP 68K 5% 1/10W	
C306	1-163-145-00	CERAMIC CHIP	0.0015uF 5% 50V	R156	1-216-081-00	METAL CHIP 22K 5% 1/10W	
C307	1-163-145-00	CERAMIC CHIP	0.0015uF 5% 50V	R157	1-236-427-11	NETWORK, RES 18K	
C308	1-164-346-11	CERAMIC CHIP	1uF 16V	R159	1-216-079-00	METAL CHIP 18K 5% 1/10W	
C309	1-164-346-11	CERAMIC CHIP	1uF 16V	R160	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C310	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	R171	1-216-001-00	METAL CHIP 10 5% 1/10W	
C311	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	R172	1-216-001-00	METAL CHIP 10 5% 1/10W	
C312	1-164-346-11	CERAMIC CHIP	1uF 16V	R173	1-216-001-00	METAL CHIP 10 5% 1/10W	
C401	1-164-232-11	CERAMIC CHIP	0.01uF 50V				

BD	DISPLAY
-----------	----------------

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R174	1-216-001-00	METAL CHIP	10 5% 1/10W	*	A-4356-957-A	DISPLAY BOARD, COMPLETE (AEP)	
R201	1-216-061-00	METAL CHIP	3.3K 5% 1/10W			*****	
R202	1-216-073-00	METAL CHIP	10K 5% 1/10W	*	A-4356-965-A	DISPLAY BOARD, COMPLETE (G)	
R203	1-216-061-00	METAL CHIP	3.3K 5% 1/10W			*****	
R204	1-216-073-00	METAL CHIP	10K 5% 1/10W	*	A-4356-966-A	DISPLAY BOARD, COMPLETE (IT)	

R205	1-216-097-00	METAL CHIP	100K 5% 1/10W			< CAPACITOR >	
R208	1-216-033-00	METAL CHIP	220 5% 1/10W	C501	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R209	1-216-081-00	METAL CHIP	22K 5% 1/10W	C502	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R210	1-236-427-11	NETWORK, RES	18K	C503	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R212	1-236-427-11	NETWORK, RES	18K	C504	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
				C505	1-163-031-11	CERAMIC CHIP 0.01uF	50V
R214	1-239-039-11	NETWORK, RES	22K	C506	1-163-031-11	CERAMIC CHIP 0.01uF	50V
R218	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	C511	1-126-157-11	ELECT 10uF	20% 16V
R219	1-216-073-00	METAL CHIP	10K 5% 1/10W	C512	1-126-157-11	ELECT 10uF	20% 16V
R220	1-216-001-00	METAL CHIP	10 5% 1/10W	C1001	1-163-038-00	CERAMIC CHIP 0.1uF	25V
R222	1-236-427-11	NETWORK, RES	18K	C1002	1-163-025-11	CERAMIC CHIP 0.001uF	50V
R223	1-216-081-00	METAL CHIP	22K 5% 1/10W	C1003	1-124-442-00	ELECT 330uF	20% 6.3V
R224	1-216-081-00	METAL CHIP	22K 5% 1/10W	C1004	1-163-038-00	CERAMIC CHIP 0.1uF	25V
R225	1-216-081-00	METAL CHIP	22K 5% 1/10W	C1011	1-124-584-00	ELECT 100uF	20% 10V
R226	1-216-081-00	METAL CHIP	22K 5% 1/10W	C1012	1-163-038-00	CERAMIC CHIP 0.1uF	25V
R230	1-236-413-11	NETWORK, RES	1.2K	C1013	1-163-031-11	CERAMIC CHIP 0.01uF	50V
R231	1-236-413-11	NETWORK, RES	1.2K	C1015	1-163-038-00	CERAMIC CHIP 0.1uF	25V
R232	1-216-041-00	METAL CHIP	470 5% 1/10W	C1016	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
R233	1-216-041-00	METAL CHIP	470 5% 1/10W	C1020	1-164-222-11	CERAMIC CHIP 0.22uF	25V
R301	1-236-413-11	NETWORK, RES	1.2K	C1023	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
R303	1-216-055-00	METAL CHIP	1.8K 5% 1/10W	C1024	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
R304	1-216-055-00	METAL CHIP	1.8K 5% 1/10W	C1025	1-163-038-00	CERAMIC CHIP 0.1uF	25V
R305	1-216-097-00	METAL CHIP	100K 5% 1/10W	C1026	1-126-177-11	ELECT 100uF	20% 10V
R306	1-216-097-00	METAL CHIP	100K 5% 1/10W	C1030	1-163-038-00	CERAMIC CHIP 0.1uF	25V
		< VARIABLE RESISTOR >		C1031	1-163-038-00	CERAMIC CHIP 0.1uF	25V
RV101	1-241-395-11	RES, ADJ, METAL GLAZE 10K (TRACKING GAIN)		C1032	1-126-154-11	ELECT 47uF	20% 6.3V
RV102	1-241-395-11	RES, ADJ, METAL GLAZE 10K (FOCUS GAIN)		C1033	1-126-154-11	ELECT 47uF	20% 6.3V
		< SWITCH >		C1034	1-163-025-11	CERAMIC CHIP 0.001uF	50V
SW101	1-572-085-11	SWITCH, LEAF (LIMIT IN)		C1035	1-163-038-00	CERAMIC CHIP 0.1uF	25V
		< VIBRATOR >		C1036	1-163-038-00	CERAMIC CHIP 0.1uF	25V
X201	1-579-280-11	VIBRATOR, CRYSTAL (16MHz)		C1041	1-163-038-00	CERAMIC CHIP 0.1uF	25V
X202	1-579-216-11	VIBRATOR, CERAMIC (4MHz)		C1050	1-124-910-11	ELECT 47uF	20% 50V
		*****		C1051	1-124-443-00	ELECT 100uF	20% 10V
				C1098	1-163-038-00	CERAMIC CHIP 0.1uF	25V
				C1099	1-163-038-00	CERAMIC CHIP 0.1uF	25V
						< VIBRATOR >	
				CF1001	1-579-599-21	VIBRATOR, CERAMIC (8.38MHz)	
						< CONNECTOR >	
				* CN1001	1-569-156-11	SOCKET, CONNECTOR 10P	
				* CN1002	1-569-156-11	SOCKET, CONNECTOR 10P	

DISPLAY

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
CN1003	1-695-027-11	PLUG, CONNECTOR 10P		R504	1-216-097-00	METAL CHIP 100K 5%	1/10W
* CN1004	1-566-970-11	HOUSING, CONNECTOR(PC BOARD) 8P		R505	1-216-073-00	METAL CHIP 10K 5%	1/10W
* CN1005	1-566-970-11	HOUSING, CONNECTOR(PC BOARD) 8P		R507	1-216-073-00	METAL CHIP 10K 5%	1/10W
* CN1006	1-565-980-21	HOUSING, CONNECTOR(PC BOARD) 9P		R508	1-216-080-00	METAL CHIP 20K 5%	1/10W
< DIODE >				R509	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
D1001	8-719-400-20	DIODE MA152WA		R510	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
D1002	8-719-400-18	DIODE MA152WK		R511	1-216-097-00	METAL CHIP 100K 5%	1/10W
D1004	8-719-400-20	DIODE MA152WA		R512	1-216-105-00	METAL CHIP 220K 5%	1/10W
D1005	8-719-400-20	DIODE MA152WA		R513	1-216-105-00	METAL CHIP 220K 5%	1/10W
D1007	8-719-400-20	DIODE MA152WA		R514	1-216-105-00	METAL CHIP 220K 5%	1/10W
D1030	8-719-400-46	DIODE MA3056-L		R515	1-216-105-00	METAL CHIP 220K 5%	1/10W
D1031	8-719-400-46	DIODE MA3056-L		R1001	1-216-089-00	METAL CHIP 47K 5%	1/10W
D1051	8-719-026-64	DIODE SML1260S (BGM)		R1002	1-216-073-00	METAL CHIP 10K 5%	1/10W
D1052	8-719-026-64	DIODE SML1260S (JAZZ)		R1003	1-216-049-00	METAL CHIP 1K 5%	1/10W
D1053	8-719-026-64	DIODE SML1260S (CLASSIC)		R1004	1-216-097-00	METAL CHIP 100K 5%	1/10W
D1054	8-719-026-64	DIODE SML1260S (POPS)		R1006	1-216-073-00	METAL CHIP 10K 5%	1/10W
D1055	8-719-026-64	DIODE SML1260S (DISCO)		R1007	1-216-025-00	METAL CHIP 100 5%	1/10W
D1058	8-719-026-68	DIODE SML1960A (DBFB)		R1008	1-216-073-00	METAL CHIP 10K 5%	1/10W
D1059	8-719-026-68	DIODE SML1960A (S-SUR)		R1010	1-216-041-00	METAL CHIP 470 5%	1/10W
< FLUORESCENT INDICATOR TUBE >				R1012	1-216-049-00	METAL CHIP 1K 5%	1/10W
FL1001	1-519-718-11	INDICATOR TUBE, FLUORESCENT		R1013	1-216-089-00	METAL CHIP 47K 5%	1/10W
< IC >				R1014	1-216-109-00	METAL CHIP 330K 5%	1/10W
IC106	8-759-927-29	IC SN74HCU04ANS		R1015	1-216-025-00	METAL CHIP 100 5%	1/10W
IC501	8-759-996-43	IC RC4558PS		R1017	1-216-041-00	METAL CHIP 470 5%	1/10W
IC1001	8-759-163-51	IC uPD78012GC-514-AB8		R1018	1-216-045-00	METAL CHIP 680 5%	1/10W
IC1002	8-759-500-31	IC X24C01P		R1019	1-216-049-00	METAL CHIP 1K 5%	1/10W
IC1003	8-759-991-11	IC XR1091DCP		R1020	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
IC1004	8-759-516-41	IC CD4052BCM		R1021	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
IC1005	8-749-923-34	PHOTO DIODE GPIU59XB		R1022	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
IC1006	8-759-512-44	IC SN755703		R1023	1-216-075-00	METAL CHIP 12K 5%	1/10W
IC1007	8-759-512-44	IC SN755703		R1024	1-216-041-00	METAL CHIP 470 5%	1/10W
< JUMPER RESISTOR >				R1025	1-216-045-00	METAL CHIP 680 5%	1/10W
JW1002	1-216-295-00	METAL CHIP 0 5%	1/10W	R1026	1-216-049-00	METAL CHIP 1K 5%	1/10W
JW1004	1-216-295-00	METAL CHIP 0 5%	1/10W	R1027	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
JW1005	1-216-295-00	METAL CHIP 0 5%	1/10W	R1029	1-216-295-00	METAL CHIP 0 5%	1/10W
< TRANSISTOR >				R1030	1-216-097-00	METAL CHIP 100K 5%	1/10W
Q601	8-729-141-26	TRANSISTOR 2SC3622A-LK		R1050	1-216-041-00	METAL CHIP 470 5%	1/10W
Q1001	8-729-900-61	TRANSISTOR DTA114ES		(AEP, G)			
Q1002	8-729-900-80	TRANSISTOR DTC114ES		R1050	1-216-050-00	METAL CHIP 1.1K 5%	1/10W (IT)
Q1003	8-729-900-61	TRANSISTOR DTA114ES		R1060	1-216-049-00	METAL CHIP 1K 5%	1/10W
Q1051	8-729-119-78	TRANSISTOR 2SC2785-HFE		R1061	1-216-049-00	METAL CHIP 1K 5%	1/10W
< RESISTOR >				R1062	1-216-049-00	METAL CHIP 1K 5%	1/10W
R501	1-216-073-00	METAL CHIP 10K 5%	1/10W	R1063	1-216-049-00	METAL CHIP 1K 5%	1/10W
R503	1-216-097-00	METAL CHIP 100K 5%	1/10W	R1064	1-216-049-00	METAL CHIP 1K 5%	1/10W
				R1065	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
				R1066	1-216-073-00	METAL CHIP 10K 5%	1/10W
				R1067	1-216-049-00	METAL CHIP 1K 5%	1/10W
				R1068	1-216-073-00	METAL CHIP 10K 5%	1/10W
				R1069	1-216-049-00	METAL CHIP 1K 5%	1/10W

LEAF SW-B

—61—

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
< IC >				C63	1-124-463-00	ELECT	0. 1uF 20% 50V
IC81B	8-719-710-03	DIODE PHOTO REFLECTOR NJL5165K-B		C64	1-124-902-00	ELECT	0. 47uF 20% 50V
< RESISTOR >				C65	1-136-157-00	FILM	0. 022uF 5% 50V
R81	1-249-414-11	CARBON 560 5% 1/4W		C66	1-136-157-00	FILM	0. 022uF 5% 50V
R82	1-247-818-11	CARBON 300 5% 1/4W		C81	1-161-379-00	CERAMIC	0. 01uF 20% 25V
R83	1-247-834-11	CARBON 1. 3K 5% 1/4W		C82	1-124-472-11	ELECT	470uF 20% 10V
R84	1-249-417-11	CARBON 1K 5% 1/4W		C83	1-161-379-00	CERAMIC	0. 01uF 20% 25V
R85	1-249-408-11	CARBON 180 5% 1/4W		C84	1-124-907-11	ELECT	10uF 20% 50V
< SWITCH >				C85	1-161-379-00	CERAMIC	0. 01uF 20% 25V
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)		C86	1-162-282-31	CERAMIC	100PF 10% 50V
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)		C87	1-164-095-11	CERAMIC	0. 01uF 10% 16V
S83	1-571-281-21	SWITCH, LEAF (METAL HALF)		C88	1-124-907-11	ELECT	10uF 20% 50V
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF)		C89	1-161-379-00	CERAMIC	0. 01uF 20% 25V
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF)		C90	1-124-477-11	ELECT	47uF 20% 25V
S86	1-571-281-21	SWITCH, LEAF (HALF DET)		C91	1-162-294-31	CERAMIC	0. 001uF 10% 50V
*****				C92	1-162-294-31	CERAMIC	0. 001uF 10% 50V
*	A-4356-954-A	MAIN BOARD, COMPLETE (AEP)		C93	1-161-375-00	CERAMIC	0. 0022uF 20% 50V
*****				C94	1-161-375-00	CERAMIC	0. 0022uF 20% 50V
*	A-4356-959-A	MAIN BOARD, COMPLETE (G, IT)		C95	1-124-903-11	ELECT	1uF 20% 50V
*****				C96	1-124-903-11	ELECT	1uF 20% 50V
< CAPACITOR >				C97	1-124-903-11	ELECT	1uF 20% 50V
C2	1-124-907-11	ELECT 10uF 20% 50V		C98	1-124-903-11	ELECT	1uF 20% 50V
C3	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C99	1-136-154-00	FILM	0. 012uF 5% 50V (AEP)
C4	1-162-294-31	CERAMIC 0. 001uF 10% 50V		C99	1-136-155-00	FILM	0. 015uF 5% 50V (G, IT)
C5	1-101-005-00	CERAMIC 22000PF 50V		C100	1-136-154-00	FILM	0. 012uF 5% 50V (AEP)
C7	1-101-005-00	CERAMIC 22000PF 50V		C100	1-136-155-00	FILM	0. 015uF 5% 50V (G, IT)
C8	1-101-005-00	CERAMIC 22000PF 50V		C101	1-124-907-11	ELECT	10uF 20% 50V
C9	1-102-120-00	CERAMIC 0. 0018uF 10% 50V		C102	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C10	1-161-374-11	CERAMIC 0. 0015uF 20% 50V		C103	1-124-463-00	ELECT	0. 1uF 20% 50V
C11	1-161-379-00	CERAMIC 0. 01uF 20% 50V		C104	1-126-160-11	ELECT	1uF 20% 50V
C26	1-102-953-00	CERAMIC 18PF 5% 50V (G, IT)		C105	1-126-160-11	ELECT	1uF 20% 50V
C51	1-164-052-11	CERAMIC 18PF 5% 50V		C106	1-124-903-11	ELECT	1uF 20% 50V
C52	1-164-052-11	CERAMIC 18PF 5% 50V		C107	1-162-282-31	CERAMIC	100PF 10% 50V (G, IT)
C53	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C108	1-162-211-31	CERAMIC	33PF 5% 50V (AEP)
C54	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C108	1-162-291-31	CERAMIC	560PF 10% 50V (G, IT)
C55	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C109	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C56	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C110	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C57	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C111	1-123-382-00	ELECT	3. 3uF 20% 100V
C58	1-124-907-11	ELECT 10uF 20% 50V		C112	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C59	1-161-379-00	CERAMIC 0. 01uF 20% 25V		C113	1-161-379-00	CERAMIC	0. 01uF 20% 50V (G, IT)
C60	1-124-477-11	ELECT 47uF 20% 25V		C114	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C61	1-124-925-11	ELECT 2. 2uF 20% 100V		C115	1-164-159-11	CERAMIC	0. 1uF 50V
C62	1-136-153-00	FILM 0. 01uF 5% 50V		C116	1-161-379-00	CERAMIC	0. 01uF 20% 25V

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark
C140	1-126-926-11	ELECT	1000uF	20% 10V	C268	1-130-477-00	MYLAR	0.0033uF 5%	50V
C141	1-162-282-31	CERAMIC	100PF	10% 50V	C269	1-136-157-00	FILM	0.022uF 5%	50V
C142	1-162-282-31	CERAMIC	100PF	10% 50V	C270	1-126-096-11	ELECT	10uF 20%	35V
C201	1-162-282-31	CERAMIC	100PF	10% 50V	C271	1-162-286-31	CERAMIC	220PF 10%	50V
C202	1-162-215-31	CERAMIC	47PF	5% 50V	C272	1-162-294-31	CERAMIC	0.001uF 10%	50V
C205	1-124-927-11	ELECT	4.7uF	20% 100V	C274	1-124-465-00	ELECT	0.47uF 20%	50V
C206	1-162-286-31	CERAMIC	220PF	10% 50V	C275	1-124-464-11	ELECT	0.22uF 20%	50V
C207	1-124-254-00	ELECT	0.68uF	20% 50V	C277	1-164-159-11	CERAMIC	0.1uF	50V
C208	1-124-252-00	ELECT	0.33uF	20% 50V	C281	1-161-379-00	CERAMIC	0.01uF 20%	25V
C209	1-124-252-00	ELECT	0.33uF	20% 50V	C290	1-164-159-11	CERAMIC	0.1uF	50V
C210	1-136-167-00	FILM	0.15uF	5% 50V	C291	1-164-159-11	CERAMIC	0.1uF	50V
C211	1-136-166-00	FILM	0.12uF	5% 50V	C292	1-164-159-11	CERAMIC	0.1uF	50V
C212	1-136-162-00	FILM	0.056uF	5% 50V	C293	1-164-159-11	CERAMIC	0.1uF	50V
C213	1-136-161-00	FILM	0.047uF	5% 50V	C301	1-162-282-31	CERAMIC	100PF 10%	50V
C214	1-136-157-00	FILM	0.022uF	5% 50V					(AEP)
C215	1-136-156-00	FILM	0.018uF	5% 50V	C301	1-162-288-31	CERAMIC	330PF 10%	50V
C216	1-130-482-00	MYLAR	0.0082uF	5% 50V					(G, IT)
C217	1-130-481-00	MYLAR	0.0068uF	5% 50V	C302	1-162-282-31	CERAMIC	100PF 10%	50V
C218	1-130-477-00	MYLAR	0.0033uF	5% 50V	C306	1-124-903-11	ELECT	1uF 20%	50V
C219	1-136-157-00	FILM	0.022uF	5% 50V	C307	1-164-159-11	CERAMIC	0.1uF	50V
C220	1-126-096-11	ELECT	10uF	20% 35V	C351	1-162-282-31	CERAMIC	100PF 10%	50V
C221	1-162-286-31	CERAMIC	220PF	10% 50V					(AEP)
C222	1-162-294-31	CERAMIC	0.001uF	10% 50V	C351	1-162-288-31	CERAMIC	330PF 10%	50V
C224	1-124-465-00	ELECT	0.47uF	20% 50V					(G, IT)
C225	1-124-464-11	ELECT	0.22uF	20% 50V	C352	1-162-282-31	CERAMIC	100PF 10%	50V
C227	1-164-159-11	CERAMIC	0.1uF	50V	C356	1-124-903-11	ELECT	1uF 20%	50V
C228	1-124-907-11	ELECT	10uF	20% 50V	C357	1-164-159-11	CERAMIC	0.1uF	50V
C230	1-161-379-00	CERAMIC	0.01uF	20% 50V	C805	1-164-159-11	CERAMIC	0.1uF	50V
				(G, IT)					(G, IT)
C231	1-161-379-00	CERAMIC	0.01uF	20% 25V	C855	1-164-159-11	CERAMIC	0.1uF	50V
C232	1-161-379-00	CERAMIC	0.01uF	20% 50V					(G, IT)
				(G, IT)	C951	1-124-907-11	ELECT	10uF 20%	50V
C241	1-161-379-00	CERAMIC	0.01uF	20% 25V	C952	1-126-160-11	ELECT	1uF 20%	50V
C242	1-161-379-00	CERAMIC	0.01uF	20% 25V	C953	1-124-903-11	ELECT	1uF 20%	50V
C243	1-161-379-00	CERAMIC	0.01uF	20% 25V	C954	1-124-120-11	ELECT	220uF 20%	25V
C247	1-124-925-11	ELECT	2.2uF	20% 100V	C1001	1-162-282-31	CERAMIC	100PF 10%	50V
C251	1-162-282-31	CERAMIC	100PF	10% 50V					(G, IT)
C252	1-162-215-31	CERAMIC	47PF	5% 50V	C2002	1-124-907-11	ELECT	10uF 20%	50V
C255	1-124-927-11	ELECT	4.7uF	20% 100V	C2052	1-124-907-11	ELECT	10uF 20%	50V
C256	1-162-286-31	CERAMIC	220PF	10% 50V	C9001	1-124-907-11	ELECT	10uF 20%	50V
C257	1-124-254-00	ELECT	0.68uF	20% 50V	C9002	1-124-034-51	ELECT	33uF 20%	16V
C258	1-124-252-00	ELECT	0.33uF	20% 50V					
C259	1-124-252-00	ELECT	0.33uF	20% 50V	< FILTER >				
C260	1-136-167-00	FILM	0.15uF	5% 50V	CF1	1-567-389-11	FILTER, CERAMIC (10.7MHz)		
C261	1-136-166-00	FILM	0.12uF	5% 50V	CF2	1-567-389-11	FILTER, CERAMIC (10.7MHz)	(G, IT)	
C262	1-136-162-00	FILM	0.056uF	5% 50V	CF81	1-567-389-11	FILTER, CERAMIC (10.7MHz)		
C263	1-136-161-00	FILM	0.047uF	5% 50V					
C264	1-136-157-00	FILM	0.022uF	5% 50V	< CONNECTOR >				
C265	1-136-156-00	FILM	0.018uF	5% 50V	* CN201	1-569-155-11	PLUG, CONNECTOR 10P		
C266	1-130-482-00	MYLAR	0.0082uF	5% 50V	* CN202	1-569-155-11	PLUG, CONNECTOR 10P		
C267	1-130-481-00	MYLAR	0.0068uF	5% 50V	CN203	1-695-026-11	SOCKET, CONNECTOR 10P		

MAIN

Ref. No.	Part No.	Description	Remark
* CN204	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN205	1-566-973-11	PIN, CONNECTOR (PC BOARD) 8P	
* CN206	1-566-973-11	PIN, CONNECTOR (PC BOARD) 8P	
* CN207	1-573-085-11	CONNECTOR, FPC (NON ZIF) 19P	
* CN251	1-564-509-11	PLUG, CONNECTOR 6P	
* CN901	1-564-511-11	PLUG, CONNECTOR 8P	
* CN902	1-564-509-11	PLUG, CONNECTOR 6P	
< DIODE >			
D81	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D206	8-719-933-33	DIODE HZS6A1L	
D208	8-719-987-63	DIODE 1N4148M	
D401	8-719-987-63	DIODE 1N4148M	
D821	8-719-815-85	DIODE 1S1585	
D822	8-719-815-85	DIODE 1S1585	
D914	8-719-987-63	DIODE 1N4148M	
D921	8-719-987-63	DIODE 1N4148M	
< FERRITE BEAD >			
* FB801	1-410-858-21	INDUCTOR 0uH (G, IT)	
* FB802	1-410-858-21	INDUCTOR 0uH (G, IT)	
< FRONT END >			
FE1	1-465-673-11	FRONT END (2 BAND) (AEP)	
FE1	1-465-007-11	FRONT END (FM) (4 GANG) (G, IT)	
FE2	1-236-462-11	ENCAPSULATED COMPONENT	
FE3	1-236-463-11	ENCAPSULATED COMPONENT	
< FILTER >			
FL81	1-236-465-11	ENCAPSULATED COMPONENT (G, IT)	
< IC >			
IC51	8-759-820-91	IC LC7218	
IC81	8-759-821-45	IC LA1851N	
IC201	8-759-603-14	IC M5229P	
IC231	8-759-000-49	IC uPD4066BC	
IC232	8-759-634-51	IC M5218AP	
IC234	8-759-822-26	IC LC7522K	
IC251	8-759-603-14	IC M5229P	
IC302	8-759-000-48	IC MC14052BCP	
IC902	8-759-821-93	IC LA5601	
IC9001	8-759-520-90	IC PST572E	
< IFT >			
IFT81	1-404-713-11	TRANSFORMER, IF	
IFT82	1-404-807-11	TRANSFORMER, DISCRIMINATOR	
< JACK >			
J301	1-569-181-11	JACK, PIN 2P (VIDEO/AUX)	

Ref. No.	Part No.	Description	Remark
< COIL >			
L1	1-408-425-00	INDUCTOR 220uH	
L81	1-408-399-00	INDUCTOR 1.5mH	
L83	1-410-489-11	INDUCTOR 390uH	
L1001	1-410-521-11	INDUCTOR 100uH (G, IT)	
< FILTER >			
LPF81	1-235-164-00	FILTER, LOW PASS	
LPF82	1-235-164-00	FILTER, LOW PASS	
< TRANSISTOR >			
Q1	8-729-620-19	TRANSISTOR 2SC2724-CD	
Q2	8-729-620-19	TRANSISTOR 2SC2724-CD (G, IT)	
Q4	8-729-900-61	TRANSISTOR DTA114ES	
Q5	8-729-900-80	TRANSISTOR DTC114ES	
Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q8	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q9	8-729-900-80	TRANSISTOR DTC114ES	
Q10	8-729-900-74	TRANSISTOR DTC143TS	
Q51	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q52	8-729-201-83	TRANSISTOR 2SC3112	
Q53	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q54	8-729-201-83	TRANSISTOR 2SC3112	
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q103	8-729-900-80	TRANSISTOR DTC114ES	
Q201	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q202	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q232	8-729-900-63	TRANSISTOR DTA124ES	
Q233	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q234	8-729-900-63	TRANSISTOR DTA124ES	
Q237	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q251	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q252	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q301	8-729-900-61	TRANSISTOR DTA114ES	
Q302	8-729-900-61	TRANSISTOR DTA114ES	
Q802	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q911	8-729-900-80	TRANSISTOR DTC114ES	
Q9001	8-729-900-80	TRANSISTOR DTC114ES	
Q9002	8-729-900-80	TRANSISTOR DTC114ES	
Q9003	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R1	1-249-411-11	CARBON 330 5% 1/4W	
R2	1-249-411-11	CARBON 330 5% 1/4W	
R3	1-247-891-00	CARBON 330K 5% 1/4W	
R4	1-249-411-11	CARBON 330 5% 1/4W	
R5	1-247-891-00	CARBON 330K 5% 1/4W (G, IT)	
R6	1-249-411-11	CARBON 330 5% 1/4W (G, IT)	
R7	1-249-405-11	CARBON 100 5% 1/4W (AEP)	

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
R7	1-249-407-11	CARBON	150	5%	1/4W (G, IT)	R93	1-247-891-00	CARBON	330K	5%	1/4W
R8	1-249-441-11	CARBON	100K	5%	1/4W	R94	1-249-420-11	CARBON	1.8K	5%	1/4W
R9	1-249-437-11	CARBON	47K	5%	1/4W	R95	1-249-420-11	CARBON	1.8K	5%	1/4W
R10	1-249-429-11	CARBON	10K	5%	1/4W	R96	1-249-425-11	CARBON	4.7K	5%	1/4W
R11	1-249-421-11	CARBON	2.2K	5%	1/4W	R97	1-249-425-11	CARBON	4.7K	5%	1/4W
R12	1-249-421-11	CARBON	2.2K	5%	1/4W	R98	1-249-404-00	CARBON	82	5%	1/4W
R13	1-249-433-11	CARBON	22K	5%	1/4W	R99	1-249-417-11	CARBON	1K	5%	1/4W (AEP)
R14	1-249-432-11	CARBON	18K	5%	1/4W	R99	1-249-420-11	CARBON	1.8K	5%	1/4W (G, IT)
R15	1-247-903-00	CARBON	1M	5%	1/4W	R100	1-247-848-11	CARBON	5.1K	5%	1/4W
R20	1-249-425-11	CARBON	4.7K	5%	1/4W	R102	1-249-430-11	CARBON	12K	5%	1/4W (AEP)
R31	1-249-429-11	CARBON	10K	5%	1/4W	R103	1-249-428-11	CARBON	8.2K	5%	1/4W
R32	1-249-429-11	CARBON	10K	5%	1/4W	R104	1-249-435-11	CARBON	33K	5%	1/4W
R41	1-249-429-11	CARBON	10K	5%	1/4W	R107	1-249-430-11	CARBON	12K	5%	1/4W (G, IT)
R50	1-249-417-11	CARBON	1K	5%	1/4W	R108	1-249-417-11	CARBON	1K	5%	1/4W
R51	1-249-417-11	CARBON	1K	5%	1/4W	R142	1-249-417-11	CARBON	1K	5%	1/4W
R52	1-249-417-11	CARBON	1K	5%	1/4W	R143	1-249-431-11	CARBON	15K	5%	1/4W
R53	1-249-417-11	CARBON	1K	5%	1/4W	R144	1-249-393-11	CARBON	10	5%	1/4W
R54	1-249-417-11	CARBON	1K	5%	1/4W	R200	1-247-887-00	CARBON	220K	5%	1/4W
R55	1-249-425-11	CARBON	4.7K	5%	1/4W	R201	1-249-429-11	CARBON	10K	5%	1/4W
R56	1-249-405-11	CARBON	100	5%	1/4W	R202	1-247-862-11	CARBON	20K	5%	1/4W
R57	1-249-401-11	CARBON	47	5%	1/4W	R203	1-247-862-11	CARBON	20K	5%	1/4W
R58	1-249-423-11	CARBON	3.3K	5%	1/4W	R206	1-249-427-11	CARBON	6.8K	5%	1/4W
R59	1-249-414-11	CARBON	560	5%	1/4W	R209	1-247-903-00	CARBON	1M	5%	1/4W
R60	1-249-417-11	CARBON	1K	5%	1/4W	R210	1-247-903-00	CARBON	1M	5%	1/4W
R61	1-249-410-11	CARBON	270	5%	1/4W	R211	1-247-903-00	CARBON	1M	5%	1/4W
R62	1-249-425-11	CARBON	4.7K	5%	1/4W	R212	1-247-903-00	CARBON	1M	5%	1/4W
R63	1-249-421-11	CARBON	2.2K	5%	1/4W	R213	1-247-903-00	CARBON	1M	5%	1/4W
R64	1-249-425-11	CARBON	4.7K	5%	1/4W	R214	1-247-903-00	CARBON	1M	5%	1/4W
R65	1-249-425-11	CARBON	4.7K	5%	1/4W	R215	1-249-423-11	CARBON	3.3K	5%	1/4W
R66	1-249-405-11	CARBON	100	5%	1/4W	R216	1-247-903-00	CARBON	1M	5%	1/4W
R67	1-249-423-11	CARBON	3.3K	5%	1/4W	R217	1-249-427-11	CARBON	6.8K	5%	1/4W
R68	1-249-414-11	CARBON	560	5%	1/4W	R221	1-249-441-11	CARBON	100K	5%	1/4W
R69	1-249-417-11	CARBON	1K	5%	1/4W	R222	1-249-428-11	CARBON	8.2K	5%	1/4W
R70	1-249-410-11	CARBON	270	5%	1/4W	R227	1-247-887-00	CARBON	220K	5%	1/4W
R71	1-249-433-11	CARBON	22K	5%	1/4W	R228	1-247-887-00	CARBON	220K	5%	1/4W
R72	1-249-421-11	CARBON	2.2K	5%	1/4W	R233	1-249-441-11	CARBON	100K	5%	1/4W
R73	1-249-425-11	CARBON	4.7K	5%	1/4W	R235	1-247-887-00	CARBON	220K	5%	1/4W
R74	1-249-425-11	CARBON	4.7K	5%	1/4W	R236	1-249-417-11	CARBON	1K	5%	1/4W
R81	1-249-433-11	CARBON	22K	5%	1/4W	R237	1-247-862-11	CARBON	20K	5%	1/4W
R82	1-249-417-11	CARBON	1K	5%	1/4W	R241	1-249-433-11	CARBON	22K	5%	1/4W
R83	1-249-399-11	CARBON	33	5%	1/4W	R242	1-249-417-11	CARBON	1K	5%	1/4W
R84	1-249-429-11	CARBON	10K	5%	1/4W	R243	1-249-417-11	CARBON	1K	5%	1/4W
R85	1-249-429-11	CARBON	10K	5%	1/4W	R244	1-247-816-11	CARBON	240	5%	1/4W
R86	1-249-437-11	CARBON	47K	5%	1/4W	R245	1-249-433-11	CARBON	22K	5%	1/4W
R87	1-249-409-11	CARBON	220	5%	1/4W	R246	1-247-903-00	CARBON	1M	5%	1/4W
R88	1-249-429-11	CARBON	10K	5%	1/4W	R247	1-247-854-11	CARBON	9.1K	5%	1/4W
R89	1-249-429-11	CARBON	10K	5%	1/4W	R248	1-249-437-11	CARBON	47K	5%	1/4W
R90	1-249-421-11	CARBON	2.2K	5%	1/4W	R250	1-247-887-00	CARBON	220K	5%	1/4W
R91	1-249-421-11	CARBON	2.2K	5%	1/4W	R251	1-249-429-11	CARBON	10K	5%	1/4W
R92	1-247-891-00	CARBON	330K	5%	1/4W	R252	1-247-862-11	CARBON	20K	5%	1/4W

MAIN

MIC HP

Ref. No.	Part No.	Description	Remark
R253	1-247-862-11	CARBON	20K 5% 1/4W
R256	1-249-427-11	CARBON	6.8K 5% 1/4W
R259	1-247-903-00	CARBON	1M 5% 1/4W
R260	1-247-903-00	CARBON	1M 5% 1/4W
R261	1-247-903-00	CARBON	1M 5% 1/4W
R262	1-247-903-00	CARBON	1M 5% 1/4W
R263	1-247-903-00	CARBON	1M 5% 1/4W
R264	1-247-903-00	CARBON	1M 5% 1/4W
R265	1-249-423-11	CARBON	3.3K 5% 1/4W
R266	1-247-903-00	CARBON	1M 5% 1/4W
R267	1-249-427-11	CARBON	6.8K 5% 1/4W
R271	1-249-441-11	CARBON	100K 5% 1/4W
R272	1-249-428-11	CARBON	8.2K 5% 1/4W
R277	1-247-887-00	CARBON	220K 5% 1/4W
R278	1-247-887-00	CARBON	220K 5% 1/4W
R283	1-249-441-11	CARBON	100K 5% 1/4W
R285	1-247-887-00	CARBON	220K 5% 1/4W
R287	1-247-862-11	CARBON	20K 5% 1/4W
R290	1-249-437-11	CARBON	47K 5% 1/4W
R294	1-249-442-11	CARBON	510 5% 1/4W
R297	1-249-433-11	CARBON	22K 5% 1/4W
R298	1-249-441-11	CARBON	100K 5% 1/4W
R301	1-249-417-11	CARBON	1K 5% 1/4W
R302	1-249-437-11	CARBON	47K 5% 1/4W
R306	1-249-417-11	CARBON	1K 5% 1/4W
R307	1-249-437-11	CARBON	47K 5% 1/4W
R308	1-249-417-11	CARBON	1K 5% 1/4W
R309	1-249-417-11	CARBON	1K 5% 1/4W
R310	1-249-417-11	CARBON	1K 5% 1/4W
R340	1-249-433-11	CARBON	22K 5% 1/4W
R341	1-249-433-11	CARBON	22K 5% 1/4W
R351	1-249-417-11	CARBON	1K 5% 1/4W
R352	1-249-437-11	CARBON	47K 5% 1/4W
R356	1-249-417-11	CARBON	1K 5% 1/4W
R357	1-249-437-11	CARBON	47K 5% 1/4W
R358	1-249-417-11	CARBON	1K 5% 1/4W
R359	1-249-417-11	CARBON	1K 5% 1/4W
R360	1-249-417-11	CARBON	1K 5% 1/4W
R805	1-249-482-11	CARBON	4.7 5% 1/2W (G, IT)
R831	1-249-433-11	CARBON	22K 5% 1/4W
R832	1-249-417-11	CARBON	1K 5% 1/4W
R855	1-249-482-11	CARBON	4.7 5% 1/2W (G, IT)
R923	1-249-429-11	CARBON	10K 5% 1/4W
△R924	1-217-637-00	FUSIBLE	1 5% 1/4W F
R2001	1-249-441-11	CARBON	100K 5% 1/4W
R2002	1-249-425-11	CARBON	4.7K 5% 1/4W
R2003	1-249-433-11	CARBON	22K 5% 1/4W
R2004	1-249-433-11	CARBON	22K 5% 1/4W
R2052	1-249-425-11	CARBON	4.7K 5% 1/4W
R9001	1-249-429-11	CARBON	10K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R9002	1-249-429-11	CARBON	10K 5% 1/4W
R9003	1-249-429-11	CARBON	10K 5% 1/4W
R9004	1-249-429-11	CARBON	10K 5% 1/4W
< VARIABLE RESISTOR >			
RV81	1-238-601-11	RES, ADJ, CARBON 22K	(FM TUNED INDICATOR LIGHTING LEVEL)
RV82	1-238-601-11	RES, ADJ, CARBON 22K	(AM TUNED INDICATOR LIGHTING LEVEL)
< RELAY >			
RY801	1-515-790-11	RELAY	
< TERMINAL >			
* TB1	1-537-138-31	TERMINAL BOARD (ANT)	
* TB3	4-942-204-01	PLATE, GROUND	
< TERMINAL >			
TM301	1-537-238-11	TERMINAL BOARD (SPEAKER)	
< TEST PIN >			
* TP81	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	
< VIBRATOR >			
X51	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)	
X81	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)	

*	A-4356-379-A	MIC HP BOARD, COMPLETE (AEP)	

*	A-4356-960-A	MIC HP BOARD, COMPLETE (G, IT))	

< CAPACITOR >			
C623	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C624	1-124-903-11	ELECT	1uF 20% 50V
C625	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C626	1-136-162-00	FILM	0.056uF 5% 50V
C631	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C632	1-163-117-00	CERAMIC CHIP	100PF 5% 50V (AEP)
C632	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (G, IT)
C633	1-163-005-11	CERAMIC CHIP	470PF 10% 50V (AEP)
C633	1-164-232-11	CERAMIC CHIP	0.01uF 10% 50V (G, IT)
C634	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (G, IT)

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

MIC HP

POWER

POWER

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark	
C635	1-164-232-11	CERAMIC CHIP	0.01uF	10%	50V	(G, IT)	R634	1-216-035-00	METAL CHIP	270	5%	1/10W		
C636	1-126-157-11	ELECT	10uF	20%	16V		R635	1-216-089-00	METAL CHIP	47K	5%	1/10W		
C637	1-163-117-00	CERAMIC CHIP	100PF	5%	50V		R637	1-216-105-00	METAL CHIP	220K	5%	1/10W		
C638	1-126-101-11	ELECT	100uF	20%	16V		R676	1-216-049-00	METAL CHIP	1K	5%	1/10W		
C639	1-126-157-11	ELECT	10uF	20%	16V		R677	1-216-089-00	METAL CHIP	47K	5%	1/10W		
C640	1-164-232-11	CERAMIC CHIP	0.01uF		50V		R678	1-216-071-00	METAL CHIP	8.2K	5%	1/10W		
C681	1-164-232-11	CERAMIC CHIP	0.01uF		50V		R679	1-216-089-00	METAL CHIP	47K	5%	1/10W		
C682	1-163-117-00	CERAMIC CHIP	100PF	5%	50V		R687	1-216-105-00	METAL CHIP	220K	5%	1/10W		
					(AEP)		R688	1-216-017-00	METAL CHIP	47	5%	1/10W		
C682	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	(G, IT)	R691	1-216-013-00	METAL CHIP	33	5%	1/10W		
C683	1-163-005-11	CERAMIC CHIP	470PF	10%	50V		R692	1-216-013-00	METAL CHIP	33	5%	1/10W		
					(AEP)		*****							
C683	1-164-232-11	CERAMIC CHIP	0.01uF	10%	50V	(G, IT)	*	1-645-622-12	POWER (B) BOARD					
					(G, IT)			*****						
C684	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	(G, IT)	*	1-533-213-31	HOLDER, FUSE					
C686	1-126-157-11	ELECT	10uF	20%	16V			< CONNECTOR >						
C687	1-163-117-00	CERAMIC CHIP	100PF	5%	50V									
C689	1-126-157-11	ELECT	10uF	20%	16V									
							* CN851	1-564-321-00	PIN, CONNECTOR 2P					
C691	1-124-604-00	ELECT	330uF	20%	10V		* CN853	1-564-687-11	PIN, CONNECTOR 3P					
C692	1-124-604-00	ELECT	330uF	20%	10V									

		< CONNECTOR >					*	A-4356-956-A	POWER (A) BOARD, COMPLETE (AEP)					

* CN601	1-568-454-11	PIN, CONNECTOR (PC BOARD) 9P					*	A-4356-964-A	POWER BOARD, COMPLETE (G, IT)					
* CN602	1-573-100-11	SOCKET, CONNECTOR 4P						*****						
		< IC >												
IC602	8-759-636-55	IC M5218AFP							< CAPACITOR >					
		< JACK >					C801	1-124-907-11	ELECT	10uF	20%	50V		
J601	1-562-837-21	JACK (HEADPHONES)					C802	1-162-282-31	CERAMIC	100PF	10%	50V		
J602	1-562-837-21	JACK (MIX MIC)					C803	1-124-443-00	ELECT	100uF	20%	10V		
		< TRANSISTOR >					C811	1-136-163-00	FILM	0.068uF	5%	50V		
							C812	1-136-163-00	FILM	0.068uF	5%	50V		
Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE					C821	1-126-176-11	ELECT	220uF	20%	10V		
		< RESISTOR >					C822	1-126-176-11	ELECT	220uF	20%	10V		
							C824	1-124-443-00	ELECT	100uF	20%	10V		
R616	1-216-045-00	METAL CHIP	680	5%	1/10W		C851	1-124-907-11	ELECT	10uF	20%	50V		
R617	1-216-121-00	METAL CHIP	1M	5%	1/10W		C852	1-162-282-31	CERAMIC	100PF	10%	50V		
R618	1-216-060-00	METAL CHIP	3K	5%	1/10W		C853	1-124-443-00	ELECT	100uF	20%	10V		
R619	1-216-025-00	METAL CHIP	100	5%	1/10W		C861	1-136-163-00	FILM	0.068uF	5%	50V		
R623	1-216-025-00	METAL CHIP	100	5%	1/10W		C862	1-136-163-00	FILM	0.068uF	5%	50V		
R626	1-216-049-00	METAL CHIP	1K	5%	1/10W		C871	1-126-258-11	ELECT	4700uF	20%	56V		
R627	1-216-089-00	METAL CHIP	47K	5%	1/10W		C872	1-126-258-11	ELECT	4700uF	20%	56V		
R628	1-216-071-00	METAL CHIP	8.2K	5%	1/10W		C875	1-126-233-11	ELECT	22uF	20%	50V		
R629	1-216-089-00	METAL CHIP	47K	5%	1/10W		C876	1-124-572-11	ELECT	100uF	20%	63V		
R630	1-216-017-00	METAL CHIP	47	5%	1/10W		C877	1-126-233-11	ELECT	22uF	20%	50V		
							C878	1-124-572-11	ELECT	100uF	20%	63V		
R632	1-216-097-00	METAL CHIP	100K	5%	1/10W		C881	1-162-286-31	CERAMIC	220PF	10%	50V		

POWER

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

POWER SWITCH

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R852	1-249-438-11	CARBON	56K 5% 1/4W	D1504	8-719-026-64	DIODE SML1260S (CD SYNC)	
R853	1-249-414-11	CARBON	560 5% 1/4W	D1506	8-719-026-68	DIODE SML1960A (PAUSE)	
R854	1-249-438-11	CARBON	56K 5% 1/4W	D1507	8-719-026-66	DIODE SML1460E (<D)	
△R861	1-217-156-00	RES, METAL PLATE 0.22	5W F	D1508	8-719-026-66	DIODE SML1460E (>D)	
R862	1-249-417-11	CARBON	1K 5% 1/4W	D1509	8-719-026-64	DIODE SML1260S (REC)	
R863	1-249-431-11	CARBON	15K 5% 1/4W	< RESISTOR >			
R864	1-249-441-11	CARBON	100K 5% 1/4W	R1028	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R865	1-247-727-11	CARBON	10 5% 1/2W	R1501	1-216-041-00	METAL CHIP 470 5% 1/10W	
R866	1-249-437-11	CARBON	47K 5% 1/4W	R1502	1-216-045-00	METAL CHIP 680 5% 1/10W	
△R879	1-212-881-11	FUSIBLE	100 5% 1/4W F	R1503	1-216-049-00	METAL CHIP 1K 5% 1/10W	
△R880	1-212-881-11	FUSIBLE	100 5% 1/4W F	R1504	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
△R881	1-219-134-11	FUSIBLE	0.1 5% 1/4W F	R1505	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
△R889	1-212-849-00	FUSIBLE	4.7 5% 1/4W F	R1506	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
△R902	1-219-108-11	FUSIBLE	1.5 5% 1W F	R1507	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R903	1-247-903-00	CARBON	1M 5% 1/4W	R1508	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R904	1-249-405-11	CARBON	100 5% 1/4W	R1509	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R905	1-249-432-11	CARBON	18K 5% 1/4W	R1510	1-216-029-00	METAL CHIP 150 5% 1/10W	
R906	1-247-842-11	CARBON	3K 5% 1/4W	R1511	1-216-033-00	METAL CHIP 220 5% 1/10W	
R907	1-249-431-11	CARBON	15K 5% 1/4W	R1512	1-216-037-00	METAL CHIP 330 5% 1/10W	
R908	1-247-854-11	CARBON	9.1K 5% 1/4W	R1513	1-216-041-00	METAL CHIP 470 5% 1/10W	
△R909	1-219-153-11	FUSIBLE	10 5% 1/4W F	R1514	1-216-045-00	METAL CHIP 680 5% 1/10W	
R910	1-249-417-11	CARBON	1K 5% 1/4W	R1515	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R911	1-249-417-11	CARBON	1K 5% 1/4W	R1517	1-216-075-00	METAL CHIP 12K 5% 1/10W	
△R913	1-212-865-00	FUSIBLE	22 5% 1/4W F	R1518	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R914	1-249-423-11	CARBON	3.3K 5% 1/4W	R1519	1-216-029-00	METAL CHIP 150 5% 1/10W	
R921	1-249-429-11	CARBON	10K 5% 1/4W	R1520	1-216-033-00	METAL CHIP 220 5% 1/10W	
R922	1-249-441-11	CARBON	100K 5% 1/4W	R1521	1-216-037-00	METAL CHIP 330 5% 1/10W	
R927	1-249-417-11	CARBON	1K 5% 1/4W	R1522	1-216-041-00	METAL CHIP 470 5% 1/10W	
R928	1-249-417-11	CARBON	1K 5% 1/4W	R1523	1-216-045-00	METAL CHIP 680 5% 1/10W	
△R931	1-212-849-00	FUSIBLE	4.7 5% 1/4W F	R1524	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R952	1-247-903-00	CARBON	1M 5% 1/4W	R1525	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R953	1-247-903-00	CARBON	1M 5% 1/4W	R1526	1-216-029-00	METAL CHIP 150 5% 1/10W	
R954	1-247-903-00	CARBON	1M 5% 1/4W	R1527	1-216-029-00	METAL CHIP 150 5% 1/10W	
R955	1-249-429-11	CARBON	10K 5% 1/4W	R1530	1-216-029-00	METAL CHIP 150 5% 1/10W	
△R999	9-910-999-33	FUSIBLE	0.22 5% 1/4W F	R1531	1-216-029-00	METAL CHIP 150 5% 1/10W	
*****				< SWITCH >			
*	A-4356-381-A	SWITCH BOARD, COMPLETE (AEP)	*****	S1022	1-572-184-11	SWITCH, KEYBOARD (CONTINUE)	
*	A-4356-961-A	SWITCH BOARD, COMPLETE (G, IT)	*****	S1501	1-572-184-11	SWITCH, KEYBOARD (△)	
< CONNECTOR >				S1502	1-572-184-11	SWITCH, KEYBOARD (▷)	
< DIODE >				S1503	1-572-184-11	SWITCH, KEYBOARD (■)	
CN1501	1-691-894-11	CONNECTOR, FFC/FPC 15P		S1504	1-572-184-11	SWITCH, KEYBOARD (▶▶▶)	
D1501	8-719-026-66	DIODE SML1460E (<D)		S1505	1-572-184-11	SWITCH, KEYBOARD (◀◀◀)	
D1502	8-719-026-66	DIODE SML1460E (>D)		S1506	1-572-184-11	SWITCH, KEYBOARD (REPEAT)	
D1503	8-719-026-64	DIODE SML1260S (HIGH SPEED)		S1507	1-572-184-11	SWITCH, KEYBOARD (PROGRAM)	
				S1508	1-572-184-11	SWITCH, KEYBOARD (SHUFFLE)	
				S1509	1-572-184-11	SWITCH, KEYBOARD (EDIT/TIME FADE)	
				S1510	1-572-184-11	SWITCH, KEYBOARD (CHECK)	
				S1511	1-572-184-11	SWITCH, KEYBOARD (■)	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

SWITCH TC

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
S1512	1-572-184-11	SWITCH, KEYBOARD (PAUSE)		C403	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S1513	1-572-184-11	SWITCH, KEYBOARD (▷)		C404	1-124-443-00	ELECT 100uF	20% 10V
S1514	1-572-184-11	SWITCH, KEYBOARD (◁)		C405	1-124-443-00	ELECT 100uF	20% 10V
S1516	1-572-184-11	SWITCH, KEYBOARD (↔)		C407	1-124-257-00	ELECT 2.2uF	20% 50V
S1517	1-572-184-11	SWITCH, KEYBOARD (↔)		C408	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
S1518	1-572-184-11	SWITCH, KEYBOARD (■)		C409	1-164-489-11	CERAMIC CHIP 0.22uF	10% 16V
S1519	1-572-184-11	SWITCH, KEYBOARD (▷)		C410	1-164-489-11	CERAMIC CHIP 0.22uF	10% 16V
S1520	1-572-184-11	SWITCH, KEYBOARD (◁)		C411	1-163-141-00	CERAMIC CHIP 0.001uF	5% 50V
S1521	1-572-184-11	SWITCH, KEYBOARD (↔)		C412	1-124-903-11	ELECT 1uF	20% 50V
S1522	1-572-184-11	SWITCH, KEYBOARD (↔)		C413	1-126-925-11	ELECT 470uF	20% 10V
S1523	1-572-184-11	SWITCH, KEYBOARD (REC)		C414	1-124-443-00	ELECT 100uF	20% 10V
S1524	1-572-184-11	SWITCH, KEYBOARD (HIGH SPEED)		C415	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S1525	1-572-184-11	SWITCH, KEYBOARD (CD SYNC)		C416	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S1526	1-572-378-11	SWITCH, SLIDE (DIRECTION MODE)		C417	1-124-482-11	ELECT 33uF	20% 35V
S1527	1-572-347-31	SWITCH, SLIDE (DOLBY NR)		C419	1-126-926-11	ELECT 1000uF	20% 10V
*****				C420	1-163-038-00	CERAMIC CHIP 0.1uF	25V
*****				C421	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
*****				C422	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
*	A-4356-383-A	TC BOARD, COMPLETE (AEP)		C424	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
*****				C425	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
*	A-4356-963-A	TC BOARD, COMPLETE (G, IT)		C426	1-124-478-11	ELECT 100uF	20% 25V
*****				C427	1-124-478-11	ELECT 100uF	20% 25V
< CAPACITOR >				C428	1-163-141-00	CERAMIC CHIP 0.001uF	5% 50V
C201	1-163-986-00	CERAMIC CHIP 0.027uF	10% 25V	C429	1-126-926-11	ELECT 1000uF	20% 10V
C202	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C4001	1-164-232-11	CERAMIC CHIP 0.01uF	50V
				C4002	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C203	1-124-254-00	ELECT 0.68uF	20% 50V	C4003	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C204	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	< CONNECTOR >			
C205	1-124-257-00	ELECT 2.2uF	20% 50V	CN402	1-573-101-11	SOCKET, CONNECTOR 9P	
C206	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CN403	1-580-783-11	CONNECTOR, BOARD TO BOARD	
				CN404	1-573-101-11	SOCKET, CONNECTOR 9P	
C206	1-163-141-00	CERAMIC CHIP 0.001uF	5% 50V	CN405	1-580-783-11	CONNECTOR, BOARD TO BOARD	
				CN406	1-580-783-11	CONNECTOR, BOARD TO BOARD	
C207	1-126-157-11	ELECT 10uF	20% 16V	* CN407	1-566-970-11	HOUSING, CONNECTOR(PC BOARD)8P	
C208	1-164-005-11	CERAMIC CHIP 0.47uF	25V	* CN408	1-566-970-11	HOUSING, CONNECTOR(PC BOARD)8P	
C209	1-124-257-00	ELECT 2.2uF	20% 50V	CN410	1-695-068-21	CONNECTOR, FFC/FPC 15P	
C301	1-163-986-00	CERAMIC CHIP 0.027uF	10% 25V	< DIODE >			
C302	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D401	8-719-210-33	DIODE EC10DS2	
				D403	8-719-400-18	DIODE MA152WK	
C303	1-124-254-00	ELECT 0.68uF	20% 50V	D404	8-719-400-46	DIODE MA3056-L	
C304	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D405	8-719-401-93	DIODE MA3082H-TX	
C305	1-124-257-00	ELECT 2.2uF	20% 50V	D407	8-719-400-18	DIODE MA152WK	
C306	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
C306	1-163-141-00	CERAMIC CHIP 0.001uF	5% 50V	D410	8-719-400-18	DIODE MA152WK	
				D411	8-719-400-20	DIODE MA152WA	
C307	1-126-157-11	ELECT 10uF	20% 16V	D414	8-719-210-33	DIODE EC10DS2	
C308	1-164-005-11	CERAMIC CHIP 0.47uF	25V	D416	8-719-400-18	DIODE MA152WK	
C309	1-124-257-00	ELECT 2.2uF	20% 50V	D4001	8-719-400-18	DIODE MA152WK	
C401	1-126-933-11	ELECT 100uF	20% 16V				
C402	1-163-038-00	CERAMIC CHIP 0.1uF	25V				

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
< IC >				R214	1-216-089-00	METAL CHIP	47K 5% 1/10W
IC201	8-759-300-71	IC HD14053BFP		R215	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
IC202	8-752-050-13	IC CXA1101M		R301	1-216-089-00	METAL CHIP	47K 5% 1/10W
IC203	8-759-996-43	IC RC4558PS		R302	1-216-089-00	METAL CHIP	47K 5% 1/10W
IC204	8-759-516-47	IC CD4066BCM		R303	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
IC205	8-752-055-60	IC CXA1578M		R304	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
IC401	8-759-061-36	IC M50964-302		R305	1-216-105-00	METAL CHIP	220K 5% 1/10W
IC402	8-759-207-05	IC TA7272P		R306	1-216-025-00	METAL CHIP	100 5% 1/10W
IC403	8-759-996-43	IC RC4558PS-T1		R307	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
IC404	8-759-925-85	IC SN74HC32ANS		R308	1-216-105-00	METAL CHIP	220K 5% 1/10W
IC405	8-759-520-90	IC PST572E		R309	1-216-097-00	METAL CHIP	100K 5% 1/10W
< COIL >				R310	1-216-066-00	METAL CHIP	5.1K 5% 1/10W
L403	1-410-482-31	INDUCTOR 100uH		R311	1-216-025-00	METAL CHIP	100 5% 1/10W
L404	1-410-482-31	INDUCTOR 100uH		R312	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
< TRANSISTOR >				R313	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q201	8-729-900-80	TRANSISTOR DTC114ES		R314	1-216-089-00	METAL CHIP	47K 5% 1/10W
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE		R315	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
Q301	8-729-900-80	TRANSISTOR DTC114ES		R401	1-216-037-00	METAL CHIP	330 5% 1/10W
Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE		R402	1-216-037-00	METAL CHIP	330 5% 1/10W
Q401	8-729-804-41	TRANSISTOR 2SB1122-S		R403	1-216-037-00	METAL CHIP	330 5% 1/10W
Q402	8-729-804-41	TRANSISTOR 2SB1122-S		R404	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q403	8-729-900-61	TRANSISTOR DTA114ES		R405	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q404	8-729-900-80	TRANSISTOR DTC114ES		R406	1-216-113-00	METAL CHIP	470K 5% 1/10W
Q405	8-729-900-61	TRANSISTOR DTA114ES		R407	1-216-113-00	METAL CHIP	470K 5% 1/10W
Q406	8-729-900-61	TRANSISTOR DTA114ES		R408	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q407	8-729-900-61	TRANSISTOR DTA114ES		R409	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q408	8-729-900-80	TRANSISTOR DTC114ES		R410	1-216-045-00	METAL CHIP	680 5% 1/10W
Q409	8-729-900-65	TRANSISTOR DTA144ES		R411	1-216-037-00	METAL CHIP	330 5% 1/10W
Q410	8-729-900-65	TRANSISTOR DTA144ES		R412	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q411	8-729-900-80	TRANSISTOR DTC114ES		R413	1-216-045-00	METAL CHIP	680 5% 1/10W
Q412	8-729-900-61	TRANSISTOR DTA114ES		R414	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q414	8-729-900-80	TRANSISTOR DTC114ES		R415	1-216-083-00	METAL CHIP	27K 5% 1/10W
Q415	8-729-900-61	TRANSISTOR DTA114ES		R416	1-216-073-00	METAL CHIP	10K 5% 1/10W
< RESISTOR >				R417	1-216-083-00	METAL CHIP	27K 5% 1/10W
R201	1-216-089-00	METAL CHIP	47K 5% 1/10W	R418	1-216-085-00	METAL CHIP	33K 5% 1/10W
R202	1-216-089-00	METAL CHIP	47K 5% 1/10W	R419	1-216-084-00	METAL CHIP	30K 5% 1/10W
R203	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R420	1-216-089-00	METAL CHIP	47K 5% 1/10W
R204	1-216-063-00	METAL CHIP	3.9K 5% 1/10W	R421	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R205	1-216-105-00	METAL CHIP	220K 5% 1/10W	R422	1-216-090-00	METAL CHIP	51K 5% 1/10W
R206	1-216-025-00	METAL CHIP	100 5% 1/10W	R423	1-216-080-00	METAL CHIP	20K 5% 1/10W
R207	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R424	1-216-090-00	METAL CHIP	51K 5% 1/10W
R208	1-216-105-00	METAL CHIP	220K 5% 1/10W	R425	1-216-025-00	METAL CHIP	100 5% 1/10W
R209	1-216-097-00	METAL CHIP	100K 5% 1/10W	R426	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R210	1-216-066-00	METAL CHIP	5.1K 5% 1/10W	R427	1-216-085-00	METAL CHIP	33K 5% 1/10W
R211	1-216-025-00	METAL CHIP	100 5% 1/10W	R428	1-216-089-00	METAL CHIP	47K 5% 1/10W
R212	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R429	1-216-090-00	METAL CHIP	51K 5% 1/10W
R213	1-216-081-00	METAL CHIP	22K 5% 1/10W	R430	1-216-084-00	METAL CHIP	30K 5% 1/10W
				R431	1-216-080-00	METAL CHIP	20K 5% 1/10W
				R432	1-216-090-00	METAL CHIP	51K 5% 1/10W
				R433	1-216-025-00	METAL CHIP	100 5% 1/10W

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
R434	1-216-121-00	METAL CHIP	1M	5%	1/10W	< VARIABLE RESISTOR >					
R435	1-216-073-00	METAL CHIP	10K	5%	1/10W	RV201	1-241-136-11	RES, ADJ, CARBON 10K (REC LEVEL (L))			
R436	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	RV301	1-241-136-11	RES, ADJ, CARBON 10K (REC LEVEL (R))			
R437	1-216-073-00	METAL CHIP	10K	5%	1/10W	< TEST PIN >					
R438	1-216-073-00	METAL CHIP	10K	5%	1/10W						
R440	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	* TP101	1-564-520-11	PLUG, CONNECTOR 5P			
R441	1-216-041-00	METAL CHIP	470	5%	1/10W	* TP401	1-564-517-11	PLUG, CONNECTOR 2P			
R444	1-216-073-00	METAL CHIP	10K	5%	1/10W	< VIBRATOR >					
R445	1-216-073-00	METAL CHIP	10K	5%	1/10W						
R446	1-216-097-00	METAL CHIP	100K	5%	1/10W						
R447	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	X401	1-567-819-11	VIBRATOR, CERAMIC (4MHz)			
R448	1-216-089-00	METAL CHIP	47K	5%	1/10W	*****					
R449	1-216-113-00	METAL CHIP	470K	5%	1/10W	*	1-645-618-12	VOL BOARD			
R450	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	*****					
R451	1-216-097-00	METAL CHIP	100K	5%	1/10W	< CAPACITOR >					
R452	1-216-097-00	METAL CHIP	100K	5%	1/10W						
R453	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	C418	1-126-916-11	ELECT	1000uF	20%	6.3V
R454	1-216-097-00	METAL CHIP	100K	5%	1/10W	C419	1-126-157-11	ELECT	10uF	20%	16V
R455	1-216-089-00	METAL CHIP	47K	5%	1/10W	C420	1-126-157-11	ELECT	10uF	20%	16V
R456	1-216-089-00	METAL CHIP	47K	5%	1/10W	< CONNECTOR >					
R457	1-216-089-00	METAL CHIP	47K	5%	1/10W						
R458	1-216-088-00	METAL CHIP	43K	5%	1/10W	* CN401	1-568-852-11	SOCKET, CONNECTOR 9P			
R459	1-216-089-00	METAL CHIP	47K	5%	1/10W	* CN402	1-566-973-11	PIN, CONNECTOR (PC BOARD) 8P			
R460	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	* CN403	1-568-847-11	SOCKET, CONNECTOR 4P			
R461	1-216-081-00	METAL CHIP	22K	5%	1/10W	* CN404	1-695-070-11	CONNECTOR, FFC/FPC 11P			
R462	1-216-082-00	METAL CHIP	24K	5%	1/10W	* CN451	1-564-521-11	PLUG, CONNECTOR 6P			
R463	1-216-073-00	METAL CHIP	10K	5%	1/10W	* CN452	1-566-973-11	PIN, CONNECTOR (PC BOARD) 8P			
R464	1-216-073-00	METAL CHIP	10K	5%	1/10W	< IC >					
R466	1-216-025-00	METAL CHIP	100	5%	1/10W	IC406	8-759-820-62	IC	LB1639		
R467	1-216-025-00	METAL CHIP	100	5%	1/10W	< RESISTOR >					
R470	1-216-073-00	METAL CHIP	10K	5%	1/10W	R407	1-247-887-00	CARBON	220K	5%	1/4W
R471	1-216-073-00	METAL CHIP	10K	5%	1/10W	R457	1-247-887-00	CARBON	220K	5%	1/4W
R472	1-216-073-00	METAL CHIP	10K	5%	1/10W	R486	1-249-413-11	CARBON	470	5%	1/4W
R473	1-216-073-00	METAL CHIP	10K	5%	1/10W	< VARIABLE RESISTOR >					
R474	1-216-073-00	METAL CHIP	10K	5%	1/10W	RV406	1-241-998-11	RES, VAR, CARBON 100K/100K (VOLUME)			
R475	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	*****					
R2001	1-216-073-00	METAL CHIP	10K	5%	1/10W	MISCELLANEOUS					
R4000	1-216-049-00	METAL CHIP	1K	5%	1/10W	*****					
R4001	1-216-298-00	METAL CHIP	2.2	5%	1/10W	5	1-690-997-11	WIRE (FLAT TYPE) (11 CORE)			
R4002	1-216-298-00	METAL CHIP	2.2	5%	1/10W	55	1-690-854-21	WIRE (FLAT TYPE) (16 CORE)			
R4003	1-216-298-00	METAL CHIP	2.2	5%	1/10W	61	1-690-996-11	WIRE (FLAT TYPE) (4 CORE)			
R4004	1-216-298-00	METAL CHIP	2.2	5%	1/10W	* 62	1-590-240-11	WIRE, FLAT TYPE (9 CORE)			
R4005	1-216-298-00	METAL CHIP	2.2	5%	1/10W	64	1-690-588-31	WIRE, FLAT TYPE (9 CORE)			
R4006	1-216-298-00	METAL CHIP	2.2	5%	1/10W						
R4007	1-216-298-00	METAL CHIP	2.2	5%	1/10W						
R4008	1-216-298-00	METAL CHIP	2.2	5%	1/10W						
△R4009	1-212-849-00	FUSIBLE	4.7	5%	1/4W F						
△R4010	1-212-849-00	FUSIBLE	4.7	5%	1/4W F						
△R4099	1-249-390-11	CARBON	5.6	5%	1/6W F						
R4421	1-216-049-00	METAL CHIP	1K	5%	1/10W						

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
△68	1-590-042-11	CORD, POWER (WITH CORE) (G, IT)					
△68	1-696-169-11	CORD, POWER (AEP)					
253	1-590-530-11	WIRE, FLAT TYPE					
264	1-690-853-11	WIRE (FLAT TYPE) (19 CORE)					
△305	8-848-144-11	DEVICE, OPTICAL KSS-240A					
307	1-575-001-11	WIRE, FLAT TYPE (12 CORE)					
△F801	1-532-203-00	FUSE (T2A, 250V)					
HP101	A-2003-837-F	BASE ASSY, HEAD (DECK A)					
HRPE101	A-2003-838-A	BASE ASSY, HEAD (DECK B)					
M101	X-4917-504-1	MOTOR ASSY (SLED)					
M101A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)					
M101B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)					
M102A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)					
M102B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)					
M251	A-4608-362-A	MOTOR (L) ASSY (LOADING)					
△T101	1-423-424-11	TRANSFORMER, POWER					

ACCESSORIES & PACKING MATERIALS							

	1-693-057-11	COMMANDER, STANDARD (RM-S150)					
*	4-941-548-01	LABEL, CLASS 1					
*	4-954-955-01	CUSHION, LOWER					
*	4-954-956-01	CUSHION, UPPER					

HARDWARE LIST							

#1	7-682-547-04	SCREW +BVTT 3X6 (S)					
#2	7-685-649-79	SCREW +BVTP 3X14 TYPE2 IT-3					
#3	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S					
#4	7-682-549-04	SCREW +BVTT 3X10 (S)					
#5	7-621-255-15	SCREW +PTT 2X3 (S)					
#6	7-621-770-67	SCREW +PTT 2.6X6 (S)					
#7	7-627-556-08	SCREW +P 2.6X2.8					
#8	7-621-775-00	SCREW +B 2.6X3					
#9	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT					
#10	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S					
#11	7-624-105-04	STOP RING 2.3, TYPE -E					
#12	7-621-775-10	SCREW +B 2.6X4					
#13	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S					

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

HCD-H900

SONY® SERVICE MANUAL

AEP Model

SUPPLEMENT-1

File this Supplement with the Service Manual.

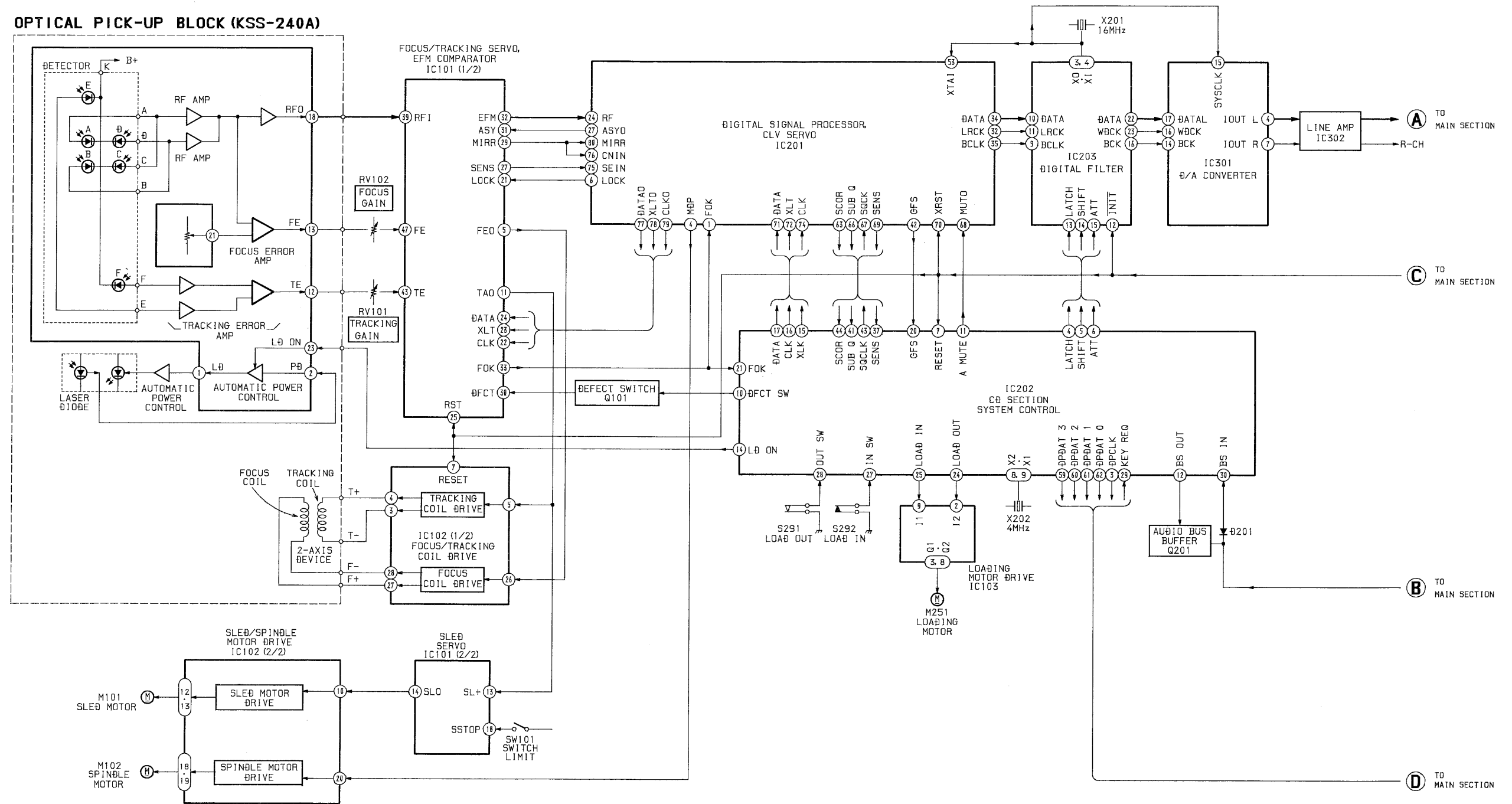
Subject : IC PIN FUNCTION
(μ PD78012GC)
BLOCK DIAGRAMS
IC Block Diagram
~~**CORRECTION**~~

IC1001 System Controller IC (μ PD78012GC-514-AB8 : Display Board)

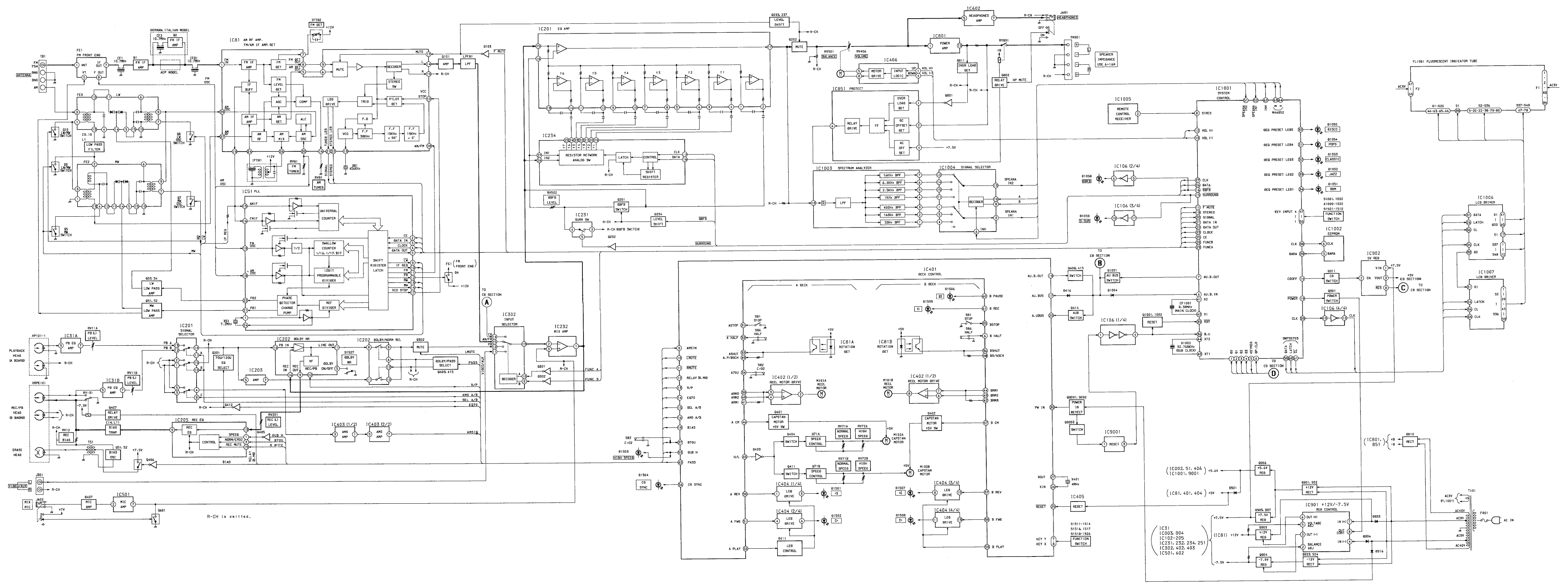
Pin No.	Signal Name	I/O	Function															
1	CD D0	I	Display data 0 from CD controller (μ PD75116GF)															
2	CD D1	I	Display data 1 from CD controller (μ PD75116GF)															
3	CD D2	I	Display data 2 from CD controller (μ PD75116GF)															
4	CD D3	I	Display data 3 from CD controller (μ PD75116GF)															
5	CD KEYREQ	O	Timer start request signal to CD controller (μ PD75116GF)															
6	AU.B.IN	I	Audio bus input															
7	AU.B.OUT	O	Audio bus output															
8	SIRCS	I	Infrared remote commander															
9	GND	–	GND															
10	$\overline{\text{POWER}}$	O	Power supply ON/OFF control. “L”: ON.															
11	$\overline{\text{F.MUTE}}$	O	Muting control. “L”: Muting.															
12	VOL (+)	O	Sound volume motor control. “L”: up.															
13	VOL (–)	O	Sound volume motor control. “L”: down.															
14	CDOFF	O	CD power supply ON/OFF control. “L”: CD OFF.															
15	$\overline{\text{SURROUND}}$	O	Surround ON/OFF control. “L”: ON.															
16	$\overline{\text{DBFB}}$	O	DBFB ON/OFF control. “L”: ON.															
17	$\overline{\text{MPX}}$	–	Not used.															
18	$\overline{\text{PON}}$	–	Not used.															
19	STEREO	I	FM stereo/monaural discriminating signal from FM/AM IF amplifier (LA1851N). “L”: stereo.															
20	SIGNAL	I	Tuning discriminating signal from FM/AM IF amplifier (LA1851N). “L”: tuning.															
21	DATA.IN	I	Serial data from tuner PLL IC (LC7218)															
22	DATA.OUT	O	Serial data to tuner PLL IC (LC7218)															
23	CLK	O	Serial clock to tuner PLL IC (LC7218)															
24	GND	–	GND															
25	CE	O	Chip select to tuner PLL IC (LC7218)															
26	LC7522 DATA	O	Serial data to EQ controller (LC7522)															
27	LC7522 CLK	O	Serial clock to EQ controller (LC7522)															
28	FUNK B	O	Control signal to input selector (MC14052) <table><tr><td>FUNK A</td><td>H</td><td>L</td><td>H</td><td>L</td></tr><tr><td>FUNK B</td><td>H</td><td>H</td><td>L</td><td>L</td></tr><tr><td>INPUT</td><td>TAPE</td><td>CD</td><td>TUNER</td><td>VIDEO/AUX</td></tr></table>	FUNK A	H	L	H	L	FUNK B	H	H	L	L	INPUT	TAPE	CD	TUNER	VIDEO/AUX
FUNK A	H	L		H	L													
FUNK B	H	H		L	L													
INPUT	TAPE	CD	TUNER	VIDEO/AUX														
29	FUNK A	O																
30	GEQ PRESET.LED5	O	LED drive for indicating GEQ disco mode. “L”: light-up.															
31	GEQ PRESET.LED4	O	LED drive for indicating GEQ pops mode. “L”: light-up.															
32	GEQ PRESET.LED3	O	LED drive for indicating GEQ classic mode. “L”: light-up.															
33	GEQ PRESET.LED2	O	LED drive for indicating GEQ jazz mode. “L”: light-up.															
34	GEQ PRESET.LED1	O	LED drive for indicating GEQ BGM mode. “L”: light-up.															
35	$\overline{\text{RST}}$	I	Reset input. “L”: reset.															
36	B.U	I	Normal/back-up mode switching signal. “L”: back-up mode.															
37	DP.CLK	I	Display data transmitting clock from CD controller (μ PD75116GF)															
38	CLK	O	Data transmitting clock to ROM (X24C01P)															
39	DATA	I	Data from ROM (X24C01P)															
40	VDD		+5V															
41	X2		Connected to crystal oscillator for main system clock (8.38MHz).															
42	X1																	

Pin No.	Signal Name	I/O	Function																																																		
43	GND	–	GND																																																		
44	XT2	–	Connected to crystal oscillator for sub system clock (32.768KHz).																																																		
45	XT1	–																																																			
46	AVSS(GND)	–	GND																																																		
47	KEY INPUT 4	I	Key input. <table><tr><td>VOLTAGE (V)</td><td>0.0</td><td>0.6</td><td>1.3</td><td>2.0</td><td>2.6</td><td>3.2</td><td>3.8</td><td>4.4</td><td>5.0</td></tr><tr><td>KEY INPUT 4</td><td>POWER</td><td>CLOCK SET TIMER</td><td></td><td></td><td></td><td></td><td></td><td></td><td>NO INPUT</td></tr><tr><td>KEY INPUT 3</td><td>PRESET/ TIMER+</td><td>PRESET/ TIMER BAND</td><td>PRESET/ TIMER–</td><td>FUNCTION</td><td>S–SR</td><td>PRESET</td><td>EQ</td><td>CLOCK SET TIMER REC</td><td>NO INPUT</td></tr><tr><td>KEY INPUT 2</td><td>MEMORY/ NEXT</td><td>STEREO/ MONO</td><td>TUNING +</td><td>TUNING –</td><td>DBFB</td><td>CONTINUE</td><td>EDIT</td><td>CHECK</td><td>NO INPUT</td></tr><tr><td>KEY INPUT 1</td><td></td><td></td><td></td><td></td><td></td><td>REPLAY</td><td>PROGRAM</td><td>SHUFFLE</td><td>NO INPUT</td></tr></table>	VOLTAGE (V)	0.0	0.6	1.3	2.0	2.6	3.2	3.8	4.4	5.0	KEY INPUT 4	POWER	CLOCK SET TIMER							NO INPUT	KEY INPUT 3	PRESET/ TIMER+	PRESET/ TIMER BAND	PRESET/ TIMER–	FUNCTION	S–SR	PRESET	EQ	CLOCK SET TIMER REC	NO INPUT	KEY INPUT 2	MEMORY/ NEXT	STEREO/ MONO	TUNING +	TUNING –	DBFB	CONTINUE	EDIT	CHECK	NO INPUT	KEY INPUT 1						REPLAY	PROGRAM	SHUFFLE	NO INPUT
VOLTAGE (V)	0.0	0.6	1.3	2.0	2.6	3.2	3.8	4.4	5.0																																												
KEY INPUT 4	POWER	CLOCK SET TIMER							NO INPUT																																												
KEY INPUT 3	PRESET/ TIMER+	PRESET/ TIMER BAND	PRESET/ TIMER–	FUNCTION	S–SR	PRESET	EQ	CLOCK SET TIMER REC	NO INPUT																																												
KEY INPUT 2	MEMORY/ NEXT	STEREO/ MONO	TUNING +	TUNING –	DBFB	CONTINUE	EDIT	CHECK	NO INPUT																																												
KEY INPUT 1						REPLAY	PROGRAM	SHUFFLE	NO INPUT																																												
48	KEY INPUT 3	I																																																			
49	KEY INPUT 2	I																																																			
50	KEY INPUT 1	I																																																			
51	SPEANA.IN 2	I	Spectrum analyzer (1K, 2.5K, 6.3K, 16KHz)																																																		
52	SPEANA.IN 1	I	Spectrum analyzer (53Hz, 160Hz, 400Hz)																																																		
53	NC	–	+5V																																																		
54		I	Destination switching. 0.6V: AEP, GERMAN model, 1.2V: ITALIAN model.																																																		
55	AVDD	–	+5V																																																		
56	AV	–	+5V																																																		
57	COLD.RST	–	Not used.																																																		
58	DATA	O	Serial data to FL driver (SN755703)																																																		
59	CLK	O	Serial clock to FL driver (SN755703)																																																		
60	LATCH	O	Serial data latch signal to FL driver (SN755703)																																																		
61	$\overline{\text{CL}}$	O	Reset signal to FL driver (SN755703). “L”: reset.																																																		
62	INH	O	Spectrum analyzer input prohibiting. “H”: Prohibiting.																																																		
63	M44052B	O	Spectrum analyzer input selecting. <table><tr><td>M44052 A</td><td>L</td><td>H</td><td>L</td><td>H</td></tr><tr><td>M44052 B</td><td>L</td><td>L</td><td>H</td><td>H</td></tr><tr><td>PIN ⑤1 INPUT</td><td>16k</td><td>6.3k</td><td>2.5k</td><td>1k</td></tr><tr><td>PIN ⑤2 INPUT</td><td>400</td><td>160</td><td>53</td><td></td></tr></table>	M44052 A	L	H	L	H	M44052 B	L	L	H	H	PIN ⑤1 INPUT	16k	6.3k	2.5k	1k	PIN ⑤2 INPUT	400	160	53																															
M44052 A	L	H	L	H																																																	
M44052 B	L	L	H	H																																																	
PIN ⑤1 INPUT	16k	6.3k	2.5k	1k																																																	
PIN ⑤2 INPUT	400	160	53																																																		
64	M44052A	O																																																			

BLOCK DIAGRAM 1 (CD SECTION)

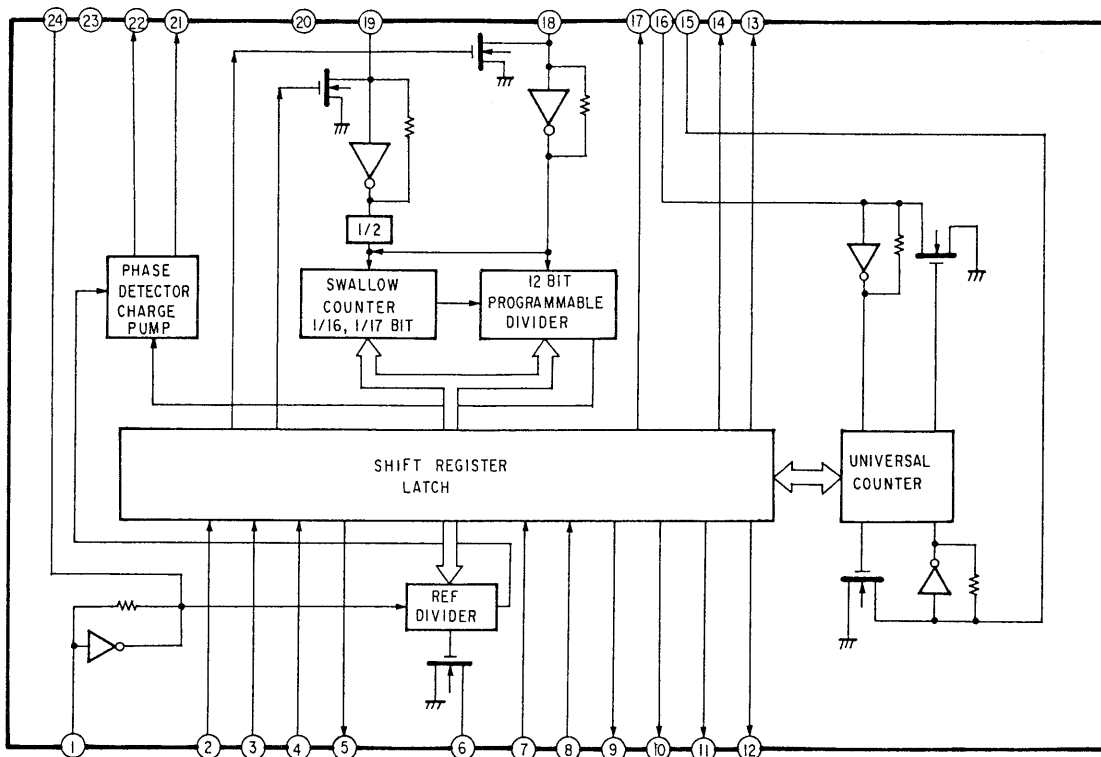


BLOCK DIAGRAM 2 (MAIN SECTION)

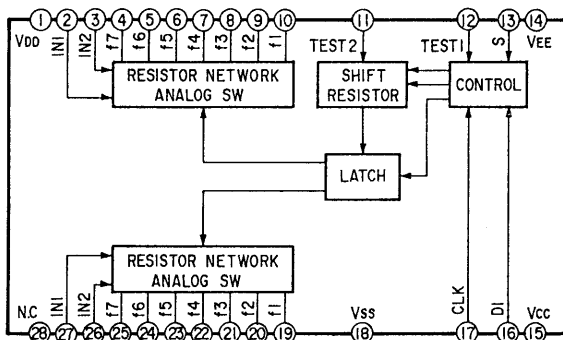


• IC BLOCK DIAGRAM

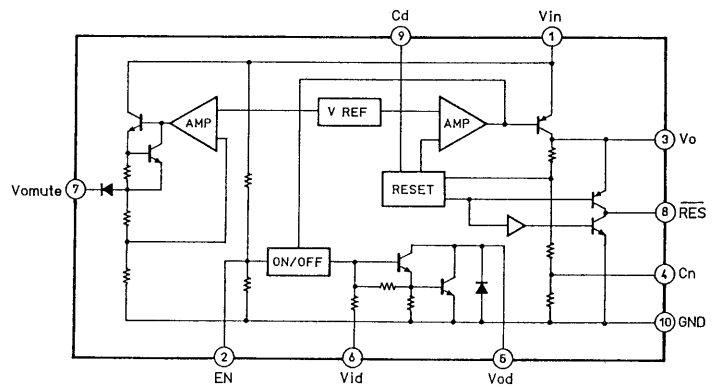
MAIN BOARD IC51 LC7218



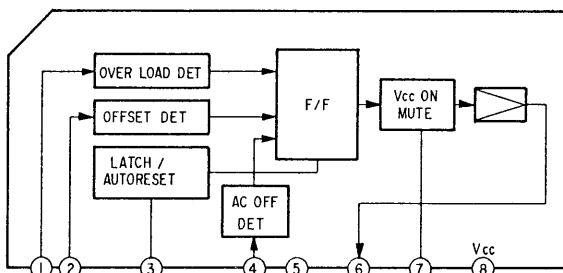
MAIN BOARD IC234 LC7522K



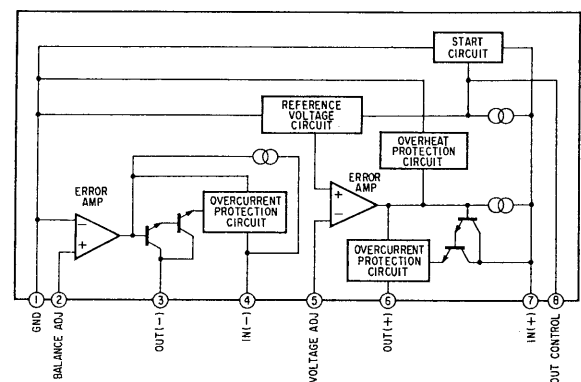
MAIN BOARD IC902 LA5601



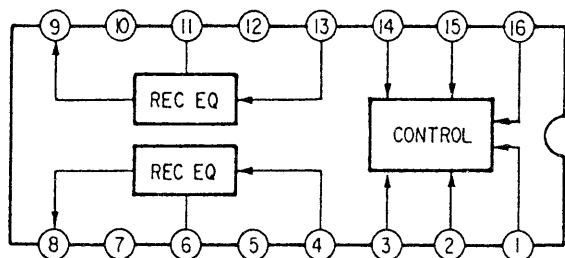
POWER BOARD IC851 uPC1237HA



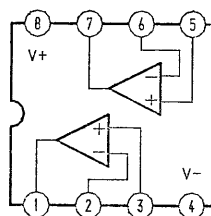
POWER BOARD IC901 M5230L-A



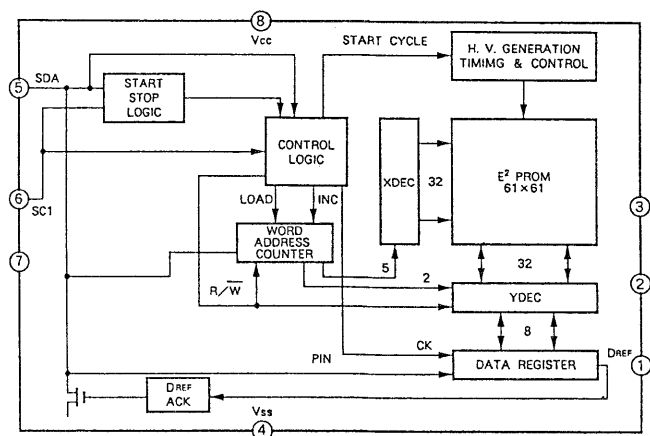
TC BOARD IC205 CXA1578M



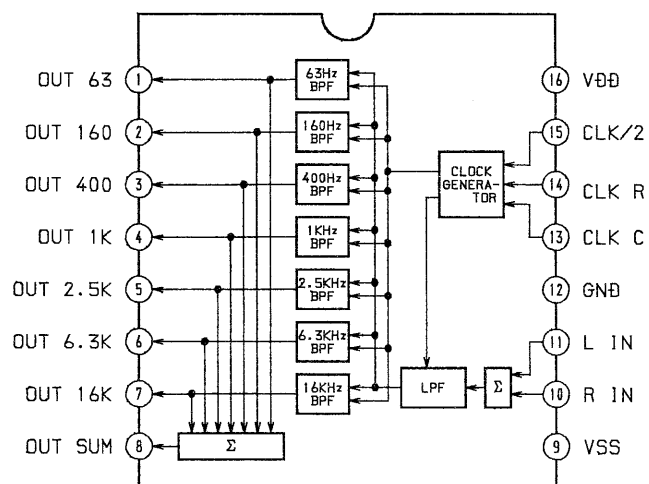
BD BOARD IC302 RC4558PS



DISPLAY BOARD IC1003 XR1091DCP



DISPLAY BOARD IC1002 X24C01P



REVISED

CORRECTION

SECTION 7 DIAGRAMS

7-3. PRINTED WIRING BOARDS —MAIN Section — : Page 24

